A Work Project, presented as part of the requirements for the Award of a Master Degree in Finance from the NOVA – School of Business and Economics.

# S&P Global Ratings' issuer credit rating process applied on the case of Lululemon Athletica, Inc.

Simon Grabner – 4231

A Project carried out on the Master in Finance Program, under the supervision of:

Professor João Pedro Pereira

January 4th, 2019

**Table of Contents**

**Abstract**

In the course of my summer internship with S&P Global Ratings, I formed part of a team to establish a mock credit rating on a real, non-rated corporation, including a fictional debt issuance scenario. The company is Canadian retailer Lululemon. This work project is structured around S&P's corporate methodology and documents the rating process we followed during our assessment. Further, it aims at providing rationales behind S&P' ratings criteria, as well as our own assessments in the course of analyzing the business of Lululemon and its industry, as well as macroeconomic factors. I establish that the firm has a creditworthiness equivalent to BB+ rated entities, stemming primarily from strong financials that are partly offset by substantial business and industry risk.

**Keywords:** S&P Global; Lululemon; Credit Risk; Ratings

# 1. Overview

This chapter provides an introduction into S&P Global Ratings' corporate methodology and hence an understanding of what an S&P credit rating is and how it is derived for a corporation. Furthermore, the company on which this work project will elaborate on, and which will be rated in the course of it, will be introduced with basic information on its operations and financials.

## 1.1 S&P Corporate Methodology

S&P Global ratings is a global leader in providing credit rating for a variety of entities, such as corporations, banks or government-related institutions, as well as sovereigns and structured finance products, amongst others. No matter what kind of entity, institution or product, S&P's ratings are comparable across industries and sectors, as they involve a shared default behavior related to the individual ratings. They form a forward-looking credit risk opinion, which can be expressed as creditworthiness relative to other rating classes. Therefore, it is not an absolute probability of default. Creditworthiness is defined as the ability and willingness to service financial obligations timely and in full. A broad distinction can be made between an issue credit rating and an issuer credit rating (ICR). While an issue rating is transaction-specific and refers to a particular obligation, an ICR is related to the entity as a whole and its ability and willingness to meet financial obligations (Thompson, Collett, Guadagnuolo, & Herrera, 2009). The case, introduced in the next subchapter, can be categorized in the latter one.

Deriving an ICR for a corporation in general follows S&P's corporate methodology. A summary of the framework is provided in appendix 1. Additionally, the ratings process follows sector specific key credit factors (KCF) that provide more detailed guidelines for ratios, weights and key performance indicators (KPI). This work project hence relies on the appropriate KCF for the retail and restaurants industry.

The ICR is the final output of the process and is built upon an anchor rating as well as a stand-alone credit profile (SACP). The anchor rating is the first building block and is formed by combining the business risk profile (BRP) and the financial risk profile (FRP). A detailed description of the anchoring will be provided in the corresponding chapter 2.3. The BRP is a combination of country and industry risk assessments, called corporate industry and country risk assessment (CICRA), and the competitive position of the issuer and aims at assessing a company's strengths and weaknesses in the marketplace. While the CICRA can be directly derived by S&P internal research and does not immediately call for case-specific modifications, the competitive position requires further analysis. The FRP assesses a company's financial position by looking at KPI that rely on historical, current and forecasted periods. Both BRP and FRP are then merged to establish an anchor rating, which can be modified, meaning moved up or down notches of ratings. These modifiers relate to (i) the capital structure, (ii) the financial policy, (iii) the liquidity, (iv) the management and governance and (v) the comparable ratings analysis. After accounting for these modifying forces, one arrives at the SACP of a company, which can be altered by group or government influence to arrive at the final ICR. The diversification and portfolio modifier only applies for conglomerates and is not applicable for the case of this work project (Puccia, Collett, et al., 2013).

### 1.2 The Lululemon Case

Vancouver-based Lululemon Athletica Inc. (Lululemon) was founded in 1998 and had its initial public offering in 2007 at NASDAQ, which raised around $327.6 million from 18.2 million offered shares (Thomson Reuters, 2007). The company is in the business of designing, distributing and retailing athletic and lifestyle apparel and accessories under two brand names, lululemon and ivivva. Manufacturing is not part of its business but done through contracted suppliers. The apparel product portfolio, consisting of a variety of lines, primarily Yoga, but also running and training, includes all kinds of apparel, pants, jackets, shorts, tops and fitness-related accessories, such as socks, bags, water bottles, Yoga equipment and underwear.

Lululemon has seen strong revenue growth over the past five years of 14.1% per year on average, amounting to around $2.65 billion in fiscal year (FY) 2017. Revenues can be broken down in three segments. These segments include revenues from (i) company-operated stores (69%), (ii) direct-to-customer, meaning e-commerce (22%), and (iii) other, mainly outlet sales (9%). Main drivers for the growth in revenues are to be found in the former two segments. A summary of Lululemon's financial statements can be seen in appendices 2 and 3.

With 334 stores in the U.S. and Canada, as of end of FY 17, as well as $2.4 billion revenues coming from this region, Lululemon's most important market is North America. Other regional exposure in form of store-operations are Europe (13 stores) and Asia and Pacific (APAC) (57 stores) (Lululemon Athletica Inc., 2018a).

What is striking about Lululemon's balance sheet is the fact that the company finances its assets of around $2 billion with an equity-ratio of around 80% (FY17). This ratio is subject to change in the fictional scenario that this work projects deals with. Within this scenario, Lululemon decided to undertake a $2 billion share-repurchase to be completed in FY 2018, financed solely with debt. The company plans to issue the following debt to fund the repurchase: (i) a new $300 million senior secured asset-based lending revolving credit facility due 2023. The facility will be undrawn at the closing of the transaction. Pricing will be LIBOR + 175 basis points (Bps); (ii) a $1.5 billion senior secured term loan due 2025 with a pricing of LIBOR + 200 Bps and 1% amortization per year with bullet maturity; (iii) $500 million senior secured notes due 2028 with a coupon rate of 5%. The spreads of 175 and 200 Bps are plausible, assuming Lululemon will be rated similarly to close competitors such as Under Armour (BB). In the beginning of 2018, US corporate debt rated at BB stood at a spread of 2.02% (Federal Reserve Bank of Saint Louis, 2018b). Also the 5% coupon falls within 2018 prevailing yields on BB rated US corporate bonds (Federal Reserve Bank of Saint Louis, 2018a).

## 2. Forming the Anchor Rating

The anchor forms the first cornerstone of the ICR. It is determined by combining Lululemon's BRP and FRP scores according to a S&P table, depicted in appendix 4. The following subchapters document the determination of BRP and FRP on the case of Lululemon.

### 2.1 Determining the BRP of Lululemon

The BRP is determined by combining the CICRA and the company-specific competitive position. The determination follows the first table shown in appendix 5. Evaluating both building blocks will be done in the following two subchapters.

#### 2.1.1 Determining the CICRA

According to S&P's corporate methodology the CICRA corresponding to a company has two components, which are industry and country risk assessments. Both components are assessed within S&P's internal research teams and hence are readily accessible without further research. The industry risk assessment considers risk routing in the cyclicality of an industry and the competitiveness and growth prospects. The latter one is weighted more heavily, which can be inferred from the second table in appendix 5, because it is forward-looking, while cyclicality is based on historical data. The cyclicality assessment is derived by looking at cyclicality of revenues and profitability, both components being evaluated during 'peak-to-trough' (PTT) stress scenarios including periods from the Great Depression (August 1929 through March 1933), as well as recessions during the second half of the twentieth century. The score, ranging from 1 (lowest) to 6 (highest) for cyclicality of an industry can be inferred from a grid that depicts the amount of revenue changes against profitability (EBITDA margin) changes of that industry during the cyclical downturn (Puccia, Daicoff, et al., 2013). Lululemon, being in the retail and restaurants industry shows a score of 3 for the cyclicality assessment, which is determined by an average PTT decline in EBITDA margin of 7.1% and in revenues of 0.6%. The competitive risk and growth assessment follows a more qualitative approach and looks at four subfactors: (i) effectiveness of entry barriers, (ii) level and trend of industry profit margins, (iii) risk of secular change and substitution of products and (iv) risk in growth trends. These subfactors can range from 1 (very low risk) to 6 (very high risk). The retail and restaurant industry shows a score of 3 (Scerbo & Wood, 2013). Combining both pillars leaves us with an industry assessment score of 3, translating into intermediate.

The country risk assessment is a more straight-forward process. It is based on S&P research on country-specific risk factors, including economic and governance-related effectiveness, the financial system and the overall credit risk influence. The country risk components can only be either neutral to the CICRA or negatively influence it, which is shown in appendix 5, and ranges from 1 (very low risk) to 6 (very high risk). Each country has a score reflecting the country-specific risk factors. In cases where corporations are exposed to the risk of more than one country, a simple weighted average is applied using EBITDA, revenues, fixed assets or other appropriate financial measures (Puccia, Collett, et al., 2013). We see revenues as the appropriate measure, also because Lululemon only provides revenues data broken down by geographic. Lululemon is incorporated in Canada and has around 72% and 19% of their revenues coming from the US and Canada, respectively. Both countries show a country risk score of 1. Other exposures such as Western Europe (score of 1), with revenues exposure of 2% and APAC (score of 4) with revenues exposure of 7% (FY17) have only limited influence given the revenues-weighted assessment. Therefore, we arrive at a country risk assessment of 1, corresponding to very low risk.

Combining the industry and the country risk assessment scores, using the table in appendix 5, results in a CICRA of 3 for Lululemon, driven by an intermediate industry risk.

### 2.1.2 Lululemon’s Competitive Position

The second building block of the BRP in S&P’s corporate methodology is the competitive position, which is established by a preliminary competitive assessment and a profitability assessment. The preliminary competitive assessment is a rather qualitative elaboration looking at (i) the competitive advantage, (ii) the scale, scope and diversity and (iii) the operating efficiency of a company. A full description of each of the considerations of the subfactors is beyond the scope of this paper, instead a summary of our findings will be provided. The three subfactors are assigned an assessment between 1 (strong) and 5 (weak) and then weighted using pre-determined, industry-specific weightings. The profitability assessment comprises the level of profitability, which is based on historical and projected EBITDA margins and other sector-specific metrics, and the volatility of profitability, measured by historical fluctuations in EBITDA margins. Important to note is that the competitive position will be assessed also in comparison to a predetermined peer group. This group comprises 'similar' companies in the industry that can be regarded as close competitors. S&P's corporate methodology requires those peers to carry a S&P rating. In the case of Lululemon, we follow its own definition of competitors including Nike Inc., Under Armour Inc., The GAP Inc., G-III Apparel Group and Abercrombie & Fitch. The weighting of the three subfactors determining the preliminary competitive assessment follows the services and product focus weighting, according to S&P corporate industry classification of retail and restaurants. Thus, the weights are 45% for competitive advantage, 30% for scale, scope and diversity and 25% for operating efficiency (Schulz, Ratnam, Yoshimura, Puccia, & Kernan, 2013).

#### 2.1.2.1 Preliminary Competitive Assessment

The competitive advantage answers the question of a company's capabilities to mitigate industry risks by capitalizing on a strong and effective strategy, differentiation and quality of products, brand reputation, barriers of entry, asset profile and technological advantage. Lululemon's product and differentiation strategy is focused primarily around producing items that are of high quality and functionality. Simultaneously, the company also achieves concept differentiation, as it markets its brand not as a product but rather as a movement whereby customers associate the brand with a lifestyle of being healthy and sporty. This is achieved by offering Yoga studios in stores, which provide a meeting point for customers to exercise and engage with the brand and one another. This allows Lululemon to charge a price premium. Furthermore, the company follows a merchandising strategy in synthetically limiting the supply of items in store and operating with quick product lifecycles, which leads to customers experiencing a sense of urgency to purchase. This results in the company being able to sell the predominant part of its products at full price. Also, Lululemon operates an omni-channel distribution network, comprising primarily company-operated stores and online channels. This allows the company to become aware of trends and customer needs when they appear and to tailor their products accordingly. We hence assess the product and brand strategy positively. Since Lululemon targets a specific customer segment of women in their mid-thirties, with high income and health consciousness, it operates in a niche market and is limited in its ability to address a broader market. We view the barriers of entry into this niche as very low, primarily for its competitors in the apparel industry. Due to competitors being equipped with significantly higher degrees of brand awareness and financial capabilities, we assess this aspect negatively. Therefore, in our opinion the competitive advantage of Lululemon is adequate/weak (4).

Scale, scope and diversity evaluates a firm's position in terms of its product as well as geographic diversity, the volume, size and share of the market and the maturity of the products. Limited diversity in suppliers and products can lead to higher risks and unstable revenues and profitability, as is also true for a focus on a narrow segment of customers. In Lululemon's case, we found this to be true. Due to the advanced textile technology, the company uses a significantly limited number of suppliers for the manufacturing process. While altogether 65 suppliers are contracted, 5 of them make up 59% of their total production. This leaves Lululemon with limited bargaining power and higher risk to shortfalls on manufactured textiles.

Further, in terms of product diversification and customer focus, we found that Lululemon has significant disadvantages compared to its peers. While Lululemon does not provide a detailed view on revenues by segment, it states that its Yoga apparel is by far its most significant revenue driver. The high prices charged on these products exposes the company to shrinking volumes in times of economic downturn, which cannot be easily offset with the relatively limited scope of its product portfolio compared to its peers.

In terms of geographic diversity, we consider Lululemon to have an adequate position. Even though, more than 90% of its revenues are generated in North America, this market is regarded as attractive due to its purchasing power. Moreover, the company has store-operations around the globe, further diversifying their geographic concentration (Lululemon Athletica Inc., 2018a).

Regarding the market size and share, we assess Lululemon to have obtained an adequate position, as well. Compared to its peers, it has the lowest revenues (FY17) (Abercrombie & Fitch, 2018; G-III Apparel Group Ltd., 2018; Lululemon Athletica Inc., 2018a; Nike Inc., 2018; The Gap Inc., 2018; Under Armour Inc., 2018) but the overall attractiveness of the global industry of athletic apparel and leisure wear is high. Cyclicality of a business is also a measure described in the methodology. Given Lululemon's young history, this is difficult to assess. Nevertheless, we do account for the fact that its high prices are expected to expose the company more to economic turmoil than its competitors, since switching costs are virtually non-existent. Contrary, Lululemon's main sales stem from products of a relatively young market (Ipsos Public Affairs, 2016). This leaves the company with a low maturity of products and substantial potential to grow. We found this aspect to be strong.

Combining all the above-mentioned assessment leaves us with a score of 4 (adequate/weak) for scale, scope and diversity, as we assess its competitors to be in an advantage over Lululemon in this regard.

In terms of operating efficiency S&P usually looks at the asset and cost structure of a company and how an efficient management compared to its peers can result in an advantage in the form of financial flexibility and stability. This subfactor is less qualitative as it uses a number of metrics to assess and compare the level of efficiency (Puccia, Collett, et al., 2013). In assessing the operating efficiency, we looked at key ratios such as gross- and EBITDA margin, selling, general and administrative (SGA) expenses, inventory turnover and cash conversion cycle (CCC) to evaluate the working capital (WC) and the cost structure, as well as revenue metrics such as sales per square foot (SSF). This is in line with the corresponding KCF of S&P (Schulz et al., 2013). A summary of the metrics is provided in appendix 6 (Abercrombie & Fitch, 2018; G-III Apparel Group Ltd., 2018; Lululemon Athletica Inc., 2018a; Nike Inc., 2018; The Gap Inc., 2018; Under Armour Inc., 2018).

We find Lululemon to be on par with its peers when it comes to the cost structure. Its gross margin over the last five years has been at around 50% and has been floating continuously above peer averages. In FY17 it was at 53.1%, outperforming its peers with an average gross margin of 44.9%. Similarly, comparatively lower SGA expenses as percentage of revenue have been prevailing, which amounted to 34.4% in FY17, compared to 37.9% for its peers. Lululemon has seen this ratio increasing over the last 5 years at an annual 1.3% on average. This has been sending its EBITDA Margin tumbling from 27.7% in FY13 to 22.7% in FY17. The peer average lies at around 10% in FY17. One significant disadvantage hidden in the SGA expenses is the leasehold. Lululemon leases all of its stores and has substantial operating leasing expenses under long-term leasing contracts. The rental costs under the agreements are a function of the number of stores operated and increased between FY12 and FY17 at an average annual rate of 15.4% from $82.4 million around $186 million, shown in appendix 7. In FY17 these costs made up around 20% of SGA expenditures. As of end of FY17, the leasehold agreements ranged between 2 and 15 years (Lululemon Athletica Inc., 2015, 2018a). Our opinion is that these costs form a substantial part of Lululemon's cost structure, which is very inflexible due to the long-term contracts, and therefore we consider this in the assessment of the cost structure. Thus, we assess the cost structure as being adequate (3).

Using the weights for the services and product focus industry of 45% competitive advantage, 30% scale, scope and diversity and 25% operating efficiency, we arrive at a preliminary competitive position of fair (4).

**2.1.2.2 Profitability**

The fourth subfactor assesses a company's performance and standing in terms of its profitability and has the potential to alter the previously established preliminary competitive position. This subfactor comprises two assessments: (i) the level of profitability and (ii) the volatility of profitability. Profitability is assessed as it is an important factor for credit protection. Higher margins and the ability to overcome cyclicality are strong indictors for creditworthiness, according to S&P (Puccia, Collett, et al., 2013).

The level of profitability is evaluated by using forward- and backward-looking data on EBITDA margins. Important to note is that the EBITDA is adjusted for lease and stock compensation expenditures. We use margins for FY16 through FY20. Obviously, FY18 through FY20 are based on a financial forecast, on which further details will be provided in chapter 2.2. Appendix 7 provides an overview of the historical and forecasted EBITDA margins. We use a simple average over the yearly margins and arrive at an average EBITDA margin of 26.8%. S&P assesses the level of profitability in the industry context and ranks margins according to the appropriate thresholds for the specialty retail industry, which are below average (<10%), average (10% - 16%) and above average (>16%). Hence, Lululemon is assessed to have an above average level of profitability.

The volatility of profitability assesses a company's profitability performance backward-looking over a time period of seven years. We regress the adjusted EBITDA of FY11 through 17 against time. The results are shown in appendix 8. The actual volatility is then measured in form of the standard error of the regression (SER). The SER indicates an estimation of the deviation around the linear regression trend line. The advantage of this statistical measure is that it regards deviation on both sides of the trend line as equally volatile. In our case, the SER is at $52.12 million. The actual score is based on the SER as percentage of the average EBITDA over the seven-year period. This leaves us with a SER of 9.68% of the average EBITDA. Comparing this to the industry group, we assess Lululemon to lie within the medium/low volatility percentile (7.61% - 11.02%) and assign a score of 3 out of 6 (6 being the worst), which translates into satisfactory.

Using the first table in appendix 9, we can derive Lululemon's profitability assessment. The resulting score for this subfactor is 2, indicating strong profitability. The second table in appendix 9 shows how the competitive position is built, using the preliminary competitive position score and the profitability score. According to our evaluation of the four subfactors, we assess Lululemon's competitive position to be satisfactory at a score of 3.

Now we have all ingredients to derive the BRP for Lululemon by combining the CICRA with the competitive position score. Using the table in appendix 10 we arrive at a BRP that is assessed as satisfactory with a score of 3.

The table in appendix 15 depicts Lululemon's BRP and FRP against its peers. Clearly, Lululemon comes in second in terms of the BRP profile, driven by strong CICRA and profitability scores.

## 2.2 Cashflow, Leverage and the FRP

The second pillar of the anchor in S&P's corporate methodology is the FRP of a company. Based on a mixture of historical and forecasted financial performance, it measures the financial strengths and risks. For this several ratios measuring a company's exposure to interest coverage and debt are used. The underlying financial data ranges from FY16 through FY22, where the later four FYs are forecasted. A summary of the financial statements is provided in appendix 11. The financial forecast is based on a set of assumptions, described in following chapters.

### 2.2.1 Macroeconomic Assumptions

Our revenue forecast considers macroeconomic developments relevant for Lululemon. In appendix 12, gross domestic product (GDP) growth rates for Lululemon's major markets are depicted, using data from the OECD and the IMF. As can be seen, GDP growth rates are estimated to be at solid levels throughout Lululemon's developed markets at between 1.5% and 2.5% by 2022 (IMF, 2018; OCED, 2018). This is relevant as Lululemon charges high prices on its products and hence needs a strong economy where household disposable income is high. Further, we looked at trends within the Yoga industry. Using the US as representative for all Yoga markets globally, we can conclude that Yoga is overall a very young sports discipline. With more than 72% of Americans having never tried Yoga, there is still substantial market growth potential. Moreover, 31% of practitioners have only started less than a year ago and 76% have been practicing no longer than five years (Ipsos Public Affairs, 2016). Lastly, we examined trends for Lululemon's main markets, according to their annual report and strategic intentions, which are the US and China. The US, where the lion's share of the revenues come from today, has seen rather slow growth in per capita apparel spending over the last years, which is also expected to continue until 2021, at around 1.5%, basically inflation. Nevertheless, the Women & Girl segment, the main target group of Lululemon, is the strongest among all apparel segments and expected to remain there. Further, Sports & Swimwear is expected to remain at above average growth rates (see appendix 12; (Statista, 2018b)). China, which is expected to account for the biggest growth in new store openings for Lululemon, is expected to undergo favorable developments for Lululemon's growth aspirations. Chinese household disposable income grew at an annual 10% on average since 2010 (Statista, 2018a). Further, it is estimated that by 2020 around 50% of the urban households in China are considered to be middle-class with an annual income between $16,000 and $34,000 (Atsmon, Magni, Li, & Wenkan, 2012).

### 2.2.2 Financial Forecast

This chapter provides intuition on our forecast for the three financial statements, starting with the income statement. Throughout the chapter, I will refer to appendix 11.

Given all the identified trends, as well as Lululemon's strategic intention to grow outside North America (Lululemon Athletica Inc., 2018a), particularly in APAC, we forecast a slowing revenue growth over the upcoming years. This is also driven by the fact that major North American and European markets are already penetrated.

In order to forecast revenue numbers up until FY20, we identified three revenue drivers, which are (i) company-operated stores, (ii) online and (iii) other, which are mainly outlet sales. Appendix 13 showcases our revenues forecast in detail. Clearly, sales from company-operated stores make up the biggest share of total revenues. We further broke this channel down into number of stores (per region), average store size and SSF. We project average store size to slightly increase, due to bigger stores in APAC, as has already been the case over the past five years. Average store size increased from 2,872 square feet in FY13 to 3,012 square feet in FY17 (Lululemon Athletica Inc., 2013, 2015, 2016, 2017, 2018a). Contrary, we expect SSF to slightly decrease at -1% per year due to higher online traffic and bigger store size. Regarding the number of stores, we based our projections on Lululemon strategic intention outlined in their annual report (Lululemon Athletica Inc., 2018a). Hence, we expect a high percentage number of new store openings in APAC and Europe in the short-run and slowing growth towards the end of our projection periods. Store growth under the ivivva brand is projected at 0% (Lululemon Athletica Inc., 2018a). Adding up all of the aforementioned assumptions, leaves us with strong projected number of store and hence total square feet growth in the short-run and slowing growth in the long-run. Combining that with expected SSF that is continuously declining results in projected revenue growth at around 10%, 8%, 5% and 4% for the FY19 through FY22.

Moving further down the projected income statement, we assumed a stable gross margin of 56.9%, equal to FY17, as we do see no reason for change here (the difference to appendix 6 stems from the fact that Lululemon deducts depreciation before gross profit, which S&P does not allow for). In fact, gross margin for the entire peer group have remained stable over the last years (see appendix 6). As for SGA expenses, we expect these to continue the annual increase at 1.3%, which is the average annual increase over the last five years. This can be reasoned with proportionally increasing personnel and rent expenditures. Thus, we expect declining EBITDA margins at 21.5%, 20.2%, 18.9%, 17.6% and 16.3% for FY18 through FY22. This is also in line with our expectation that Lululemon's growth will cause its EBITDA margin to approach industry averages and converge to the average EBITDA margin of its peers (appendix 6). Depreciation is projected to slightly increase as percentage of revenues, due to proportionally higher CAPEX as a result of equipment for new store openings and renewal of older ones, as shown in appendix 14. Other income and non-operating income and expenses are forecasted at 0 as these have been very volatile over the past years and tended to net out over time. Interest expenses are forecasted at the sum of the 1% debt amortization of the $1.5 billion senior secured term loan, as well as interest expenses on the term loan at the S&P forecasted LIBOR of 0.75%, 1.19%, 1.51%, 1.8% and 2% for FY18 through FY22, and the 5% coupon payments on the $500 million senior notes. Tax cuts in the US leaves Lululemon with an approximate 33.3%

tax rate on their pre-tax income. Overall, we expect net income to decline due to rising costs in SGA and interest expenses as side effect of the organic growth.

The balance sheet is projected to gain significantly and almost double from $1,999 million to $3,517 million between FY17 and FY22, mainly driven by high cash balances, growing inventories and increasing property, plant and equipment (PPE). This is in line with already existing trends in Lululemon’s balance sheet over the last years, as a result of their growth. Significant assumptions are only necessary for the liability side. Here it is obvious that substantial changes are to be seen in the short- and long-term debt. Prior to FY18, this was at $0. In FY18, due to the leveraged share-repurchase, it jumped to $2 billion, comprising the term loan and the senior notes. It gradually amortizes sequentially. As the credit facility is undrawn (and in fact remains undrawn throughout the forecasting period) it is not shown on the balance sheet. We further assume constant deferred taxes and other long-term liabilities, as we do not see reason for change in this regard. Notable is that common equity dips slightly into the negative, following the $2,000 million share-repurchase, recovering thereafter again. Payables are projected to increase in line with revenues growth, adjusted for WC metrics, while taxes payable are assumed to remain constant. On the asset side, we also project receivables, inventories and other current assets to grow as a function of revenue growth, adjusted for WC metrics, which will be discussed in the cash flow section in the next paragraph. Investments in non-current assets are assumed to rise as percentage of revenue, as already outlined for CAPEX. This will have PPE increase above revenue-growth levels. Intangible assets are expected to remain constant and investments are equal to amortization in each FY. The same holds for other current assets. Note that cash balances are reduced for each FY by a continuous share-repurchase program we assumed to be appropriate, given Lululemon’s high cash reserves at each point and their intention of not distributing any dividends (Lululemon Athletica Inc., 2018a), as well as other items discussed in the next paragraph.

The forecast for the cash flow statement starts with a sequential decline in net income from continuing operations, as discussed for the income statement. Adding back the proportionally increase in depreciation for each year, as well as stock compensation expense that are estimated to be stable as percentage of revenues at FY17 level of 0.7%, we arrive at cash flows from operation before change in WC that peak in FY20 and decline thereafter. This assumes no change in compensation expense policy. The change in WC is projected by estimating metrics regarding receivables, payables and other current assets and liabilities outstanding in days, as well as inventory turnover. As for receivables outstanding, Lululemon is already outperforming its peers (see appendix 6) and we see neither room for further improvement, nor reason for a worse performance in the future. Hence, we assume no change after FY18, and estimate receivables as days of sales of 2.4. Due to increasing online sales, we expect inventory turnover to weaken slightly and thus assume an annual 1% increase in inventories as days of costs of goods sold (COGS), reaching around 101 days by FY22, which is still at an average ratio compared to its peers. As for payables outstanding, we expect Lululemon to gain bargaining power with its suppliers due to growing scales. Therefore, we assume an annual 5% growth in payables as days of COGS, increasing from 7.2 to 9.2 days from FY17 trough FY22. Still, this is significantly weaker than its peers. Other current assets as days of sales have been very volatile over the past 5 years, which is why we assume it to be at 15.4 days, the average over these periods. Similarly, other liabilities as days of COGS historically have been very inconsistent however a growth trend could be witnessed. Thus, we projected a growth rate equal to the average growth over the past 5 years. Overall, we project a positive change in WC over the upcoming periods, driving up the cash flow from operations to just over $500 million by

FY20. The CCC is projected to increase from 91.7 days in FY17 to 94.3 days in FY22, still on par with its peers, but slightly above the FY17 average of 87.9 days. Higher CAPEX as percentage of revenues will depress the free operating cash flow from $331 million in FY17 to $251 million by FY22. Since Lululemon historically has never undertook acquisitions or purchase and sales of intangibles, and as we do not see any reason why this should change, the only items altering the cash flow for debt repayment is the purchase and sale of common stock. Additional to the $2 billion share repurchase in FY18, we assumed a sequential share-repurchase of $100 million in each year thereafter, as this is in line with Lululemon's historical share-repurchase program and puts the high cash reserves to good use. Further, we assumed an annual sale of common stock of around 0.2% of revenues, in line with historical transactions. Accounting for the amortization of the term loan from FY19 onwards, we arrive at gradually declining, positive changes in cash and short-term investments, driving the cash to almost $2 billion by FY22, up from $990 million in FY17.

### 2.2.3 Credit Metrics

S&P uses cash flow and leverage ratios to assess the FRP. A distinction can be made between core and supplementary ratios. Appendix 16 depicts a summary of the ratios, as well as the corresponding thresholds. Important to note is that these thresholds correspond to industries with standard volatility, meaning a CICRA of 1 or 2. The core ratios look at EBITDA and funds from operations (FFO) ratios. This is because EBITDA is a widely used metric and hence provides for good comparison. As for FFO, S&P uses it due to its lower volatility since it eliminates WC fluctuations and hence provides for a smoother year-on-year comparison. Appendix 17 shows how both cash flow measures are derived. Moreover, it provides intuition behind the adjustments for debt and interest (Samson, Bukspan, & Dubois-Pelerin, 2007). In order to arrive at net debt, we decided to apply a 30% haircut on the surplus cash. This 30% are the sum of a 25% haircut S&P usually applies when there is not enough information available, and a 5% haircut stemming from (i) the retail industry's characteristics of not actually having all the cash available due to the various payment methods of customers and (ii) the expansion outside North America, particularly in APAC, which causes cash to be 'locked' in certain areas and trigger repatriation expense (Puccia, Kernan, et al., 2013). Clearly, the capital structure and hence the leverage ratio substantially changes with the debt issuance in FY18, turning net debt into a positive figure. Since the periods before and after the debt issuance cannot be readily compared, we stress the focus in our analysis on FY18 though FY20, weighting them with 30%, 40% and 30%, respectively (Puccia, Collett, et al., 2013).

Appendix 18 provides an overview of the core and supplementary ratios, as well as the corresponding weighted averages. FFO to debt is at a weighted average ratio (WAR) of 44.7% and debt to EBITDA at 1.7x. This puts both core ratios at intermediate (3) and modest (2) risk, respectively (see appendix 16). The supplementary coverage ratios FFO to interest and EBITDA to interest are at a WAR of 16.4x and 21.5x, respectively and hence minimal (1). Finally, the supplementary payback ratios cash flow from operations (CFO) to debt, free operating cash flow (FOCF) to debt and discretionary cash flow (DCF) to debt amount to a WAR of 34.2%, 19.5% and 19.5%, respectively (see appendix 18). The KCF for the retail and restaurants industry deem the supplementary payback ratios more relevant in assessing the FRP, as the capabilities to achieve free cash flows after business related investments allows for lower leverage and shareholder distributions such as share repurchases (Schulz et al., 2013). Therefore, we stress our focus on the supplementary payback ratios which can be assessed as carrying intermediate (3) risk. This puts the FRP of Lululemon, in our opinion, at intermediate risk with a score of 3.

## 2.3 Anchoring

Having assessed both BRP and FRP, we can now cycle back to appendix 4 to define the anchor. As the BRP was assessed as satisfactory (3) and the FRP as intermediate (3), we establish the anchor according to S&P corporate methodology at a split rating of bbb/bbb-. Following S&P's corporate methodology on how to proceed in a case of a split anchor, we look at the comparative strength of the BRP (Puccia, Collett, et al., 2013). For reasons expressed in chapter 2.1, we do not assess Lululemon's BRP to be significantly stronger than its peers. Compared to Under Armour, which we view as the most comparable company in terms of size and products offered, we assess Lululemon to be similar in regard to the BRP. Considering Under Armour's BRP of significant (4) and a long-term rating of BB (see appendix 15), we believe the weaker rating of the split anchor is more appropriate. Thus, we establish Lululemon's anchor rating at bbb-.

## 3. Modifying the Anchor and Forming the SACP

S&P's corporate methodology provides for six modifiers to alter the anchor rating and ultimately establish the SACP of a corporation. The first modifier, shown in appendix 1, is diversification and portfolio effect and is not applicable for Lululemon as it is limited to conglomerates and companies with multiple core business lines potentially operated through separate entities (Puccia, Collett, et al., 2013). Hence, the modifiers relevant to the case are limited to the capital structure, financial policy, liquidity, management and governance and comparable ratings. As the KCF for the retail and restaurants industry provide no further guidance on the relevant modifiers (Schulz et al., 2013), we followed the guidelines laid out in S&P's corporate methodology.

### 3.1 Capital Structure

The capital structure modifier assesses the risk stemming from the capital structure that is not adequately captured within our cash flow and leverage analysis. It can result in an assessment of (1) very positive, (2) positive, (3) neutral, (4) negative or (5) very negative. S&P looks at four subfactors, which are (i) currency risk associated with debt, (ii) maturity profile of debt, (iii) interest rate risk associated with debt and (iv) investments. The first two subfactors are considered to carry the highest potential risk since they are more likely to affect the creditworthiness by altering credit metrics. In our analysis we first established a preliminary capital structure assessment by looking at the first three subfactors. This assessment is than combined with the fourth subfactor, investments, according to appendix 19. While the preliminary assessment can either be neutral, negative or very negative, the investments subfactor is assessed as neutral, positive or very positive.

Since the fictional scenario assumes only dollar-denominated issuances, we see no potential currency risk associated to debt. In regard to the debt maturity profile, S&P's corporate methodology suggests the calculation of a weighted average maturity (WAM) of debt for the assessment. The WAM is a simplified model that assumes all debt maturing beyond five years mature in year six. Since the entire debt of Lululemon matures after five years, the WAM of debt is six. S&P considers a WAM of two years or below as negative and above two years as neutral. Further, as Lululemon shows a solid FRP with intermediate and better coverage ratios, the interest rate risk is neglectable, according to S&P's corporate methodology. Since none of the above-described subfactors are negative, Lululemon's preliminary assessment of the capital structure is neutral.

The fourth subfactor evaluates equity investments in affiliated entities, that are not consolidated and hence not captured in Lululemon's financial statements. Since the company, to our knowledge, does not have any such investments, we assume that the risks stemming from equity investments are already captured in our analysis of the FRP and hence assess this subfactor as neutral (Puccia, Collett, et al., 2013). Therefore, using the table in appendix 19, our assessment of Lululemon's capital structure modifier is neutral (3), not changing the anchor rating.

### 3.2 Financial Policy

The second relevant modifier captures the risk that is potentially inherent in management's or shareholder's financial discipline and financial policy framework in regard to changing risk appetite. Since the cash flow and leverage analysis underlying the FRP only considers a relatively narrow period of FYs, the financial policy modifier aims at evaluating the risk from deviations in certain financial policies such as leverage or dividends. S&P assigns assessments as follows: (1) positive, (2) neutral, (3) negative or being owned by a financial sponsor. At the time in which we conducted the mock rating, more than four fifths of Lululemon was owned by institutional investors, mainly large asset managers (NASDAQ, 2018). Since S&P defines financial sponsorship as corporations, typically private equity firms, that hold more than 40% of a company and are expected to use aggressive financial strategies, such as excessive debt, to leverage returns, we reject the assumptions and treat Lululemon as not being owned by a financial sponsor.

Hence, we turn to the analysis of the two subfactors, financial discipline and financial policy framework. Financial discipline evaluates a corporation's willingness and intention to incremental financial risk. It can be (1) positive, (2) neutral or (3) negative. Financial policy framework can be either supportive of the overall financial strategies or non-supportive. Criteria for the assessment are transparency, comprehensiveness and sustainability of the financial policy. Together both subfactors form the overall financial policy assessment (Puccia, Collett, et al., 2013).

Financial discipline looks at the predictability and commitment of the management to maintain target credit metrics and to stay away from unforeseen increases in leverage. The assessment involves an elaboration of historical decision in regard to leverage tolerance, shareholder remuneration or acquisitions and organic growth. Historically, Lululemon followed a zero-dividends policy and has been growing primarily through store openings and e-commerce. Furthermore, the fictional scenario is the first time the company issued a substantial amount of debt. Having high cash reserves and solid operating cash flows, Lululemon was and is able to finance their organic growth without further debt issuance. In their annual statements they state that there is no intention to change their policies in regard to debt issuance, dividend payouts, growth strategy and share repurchases. There are no plans to initiate dividend payouts or lever up the capital structure. Growth is expected to come from store openings and increase in online customer traffic, rather than acquisitions (Lululemon Athletica Inc., 2018a). Relying on the publicly available information, we see no reason there will be any unforeseen shifts in their financial policy. This means current forecasted credit metrics are unlikely to change, in our opinion. Thus, we assign an assessment of (2) neutral to the financial discipline. This alone would already result in an assessment of the financial policy modifier of neutral (2). Besides, we believe that Lululemon follows a sound strategy in terms of quantifying goals, such as revenue growth to $4 billion by 2020 (Lululemon Athletica Inc., 2018b). Comprehensive quarterly and annual reports, as well as press releases and the communication of growth targets undermine our opinion that the financial policy framework of Lululemon is supportive. Therefore, we assess this modifier as (2) neutral, not moving the anchor rating.

### 3.3 Liquidity

The liquidity modifier analyzes the liquidity position of a company by means of a quantitative assessment of monetary flows. In such, it looks at sources and uses of cash. The assessment of this modifier can be: (1) exceptional, (2) strong, (3) adequate, (4) less than adequate or (5) weak. Important to note is that the assessment of the liquidity modifier limits the SACP of a company such that an assessment of adequate is necessary to receive a SACP of bbb- or higher. Conversely, an assessment of less than adequate limits the SACP to bb+ or lower ratings.

The underlying factors for the liquidity analysis are sources and uses of cash over a time frame of multiple FYs. In our case, we apply uses and sources on a full-year basis as the change in the capital structure in course of the fictional scenario happens amidst FY18, which makes half-year projections meaningless. KPIs for liquidity are calculated by (i) subtracting sources from uses of cash in every FY and (ii) dividing uses by sources of cash.

A summary of our analysis is shown in appendix 20. Sources of cash comprise cash and liquid investments at the beginning of the period, forecasted FFO (if positive), forecasted WC inflows (if positive), proceeds from asset sales, undrawn committed bank lines maturing beyond one year, share issuances and expected cash injections. Uses of cash can be found in maturing short- and long-term debt, debt amortization, forecasted FFO (if negative), projected CAPEX, forecasted WC outflows (if negative), changes in cash estimated due to EBITDA decline, cash-based postretirement employee benefit top-up, acquisitions, dividend payments and share repurchases. Assumptions for the individual items of sources and uses are outlined in our FRP analysis in chapter 2.2.

As can be seen in appendix 20, the sources exceed the uses in our base case projections in any FY by 1.59, 5.68 and 5.88 times for the upcoming 12, 24 and 36 months, respectively. This increase in liquidity strength is primarily driven by the cash balance. As for the cash injection of $2 billion, this could be also captured in the cash balance. The important aspect here is, though, that the share repurchase is a cash neutral action, which our analysis reflects.

We further stressed the liquidity test within a ‘strong’ scenario, which would be required to obtain an ICR of BBB- and higher. Passing this test means a company is able to withstand market turmoil while also being able to serve debt obligation within the next 24 months. The stress test inherent in this scenario reduces EBITDA by 30%, according to S&P. Passing requirements include a 12-month sources-to-uses ratio of 1.5 and a ratio above 1 for the rest of the periods within the base case. Furthermore, cash sources have to remain higher than uses even after EBITDA declines of 30% (Lundberg, Altberg, & Puccia, 2013). Lululemon passes these requirements in our analysis. Testing for (1) exceptional liquidity showcases weaknesses in the stress scenario, which stresses EBITDA with 50% declines. The company fails this stress scenario, given S&P’s passing requirements.

Therefore, we assign an assessment of (2) strong to the liquidity modifier. Since the anchor rating is bbb-, the liquidity modifier has no power to alter the rating, but supports investment grade ratings (Puccia, Collett, et al., 2013).

### 3.4 Management and Governance

The management and governance modifier is the most qualitative one within S&P corporate methodology framework. It is relevant as prudent management, operational effectiveness and strategic capabilities strengthen a company's market position. Specifically, the modifier looks at (i) strategic positioning, (ii) risk and financial management, (iii) organizational effectiveness and (iv) governance. While the former three are subfactors that form the management score, governance possesses seven subfactors that establish the score. The subfactors of the management score are evaluated as either positive, neutral or negative. The governance subfactor can only be neutral or negative. The overall score for this modifier can be (1) strong, (2) satisfactory, (3) fair or (4) weak, and is established by aggregating the scores of the subfactors for management and governance. Important to note is that the assessment involves an evidence-based analysis. This implies that any lack of information for the individual subfactors will lead to a neutral score, as no evidence is present that would support a positive or negative evaluation. Since valuable information for this modifier usually comes from meetings with the management of the rated entity, we are limited in our analysis due to lack of information. Our analysis follows S&P guidelines on the management and governance modifier (Woodell, Puccia, Dreyer, & Hazell, 2012).

The first management subfactor concerns the strategic positioning. It is evaluated by looking at planning, consistency with corporate and market capabilities and controlling of the strategy. We assess this subfactor as positive. Lululemon has a clear strategy in place that involves organic growth through expanding its store-operations and e-commerce sector. Further, we believe the projected growth in the niche market is consistent with global Yoga trends (see chapter 2.2.1), as well as financial capabilities due to solid operating cash flows providing for financing. Lululemon also proved in recent history to comply with its strategic intention concerning growth and restructuring, such as in the case of their ivivva brand (Lululemon Athletica Inc., 2018a). Risk and financial management is the second subfactor. This subfactor is difficult to assess with solely public information. We do recognize a sound financial policy in the past as excessive and irresponsible risk taking has never occurred. Operational and enterprise-wide risk management standards cannot be readily assessed from the outside. Hence, we score this subfactor as neutral. The third subfactor of the management assessment is organizational effectiveness. Again, it is impossible to reliably assess this subfactor without gaining a deeper insight into the company through information provided in meetings. We do not see any positive or negative events that recently have occurred altering our assessment of operational effectiveness, management's expertise and experience and management's depth and breadth. We do note recent changes in top management. Former CEO Laurent Potdevin resigned due to not complying with Lululemon's expectation of 'highest levels of integrity and respect for one another' (Lululemon Athletica Inc., 2018d). Later on, Lululemon appointed Calvin McDonald as new CEO, with experience in the luxury brand industry (Lululemon Athletica Inc., 2018c). Further, the company appointed Patrick Guido as CFO, who has 15 years of experience in retail (Lululemon Athletica Inc., 2018e). Nevertheless, we do not expect these personnel changes to significantly affect the organizational effectiveness. Therefore, with no further reason to assume substantial positive or negative deviations, we assess the organizational effectiveness subfactor as neutral.

Governance has the potential to negatively shift the management and governance assessment or stay neutral. This is because it is assumed that even strong governance cannot compensate operational and financial weaknesses. The analysis is based on seven subfactors, which are (i) board effectiveness, (ii) entrepreneurial and controlling ownership, (iii) management culture,

(iv) regulatory, tax or legal infractions, (v) communication of messages, (vi) internal controls and (vii) financial reporting and transparency. Firstly, we assess board oversight as neutral, as we could not find evidence that the board is insufficiently independent, which could imply a weak oversight of management's actions. The ownership structure of Lululemon is fairly diverse and the lion's share is held by giant and renowned institutional investors (NASDAQ, 2018). The second subfactor primarily concerns family-run businesses that could cause management to put their interests above those of other stakeholders, due to the controlling ownership structure. For the same reasons as with the first subfactors, we do not see any conflict in the case of Lululemon. Thus, we assess it as neutral. Thirdly, we also assess the management culture as neutral. This can be reasoned with the fact that we could not find any evidence of conflicts of interest between management and other stakeholders. Further, we reckon that the resignation of former CEO Laurent Potdevin is a sign for the ultimate decision-making power of the board. Next, legal infractions are listed in Lululemon's annual reports. Historically, we found the company to not have substantially more or less infractions than its peers. Also, in terms of authority relationship, we see no reason this subfactor should negatively influence our assessment and hence we score it as neutral. The fifth subfactor, communication of messages, is difficult to assess without a deeper insight into the company. We recognize that the company undertakes public announcements on a regular basis on major events, such as change in management, and provides detailed background information. We also could not find any issues in the recent past that stem from inconsistent communication with stakeholders. Therefore, we also assess this subfactor as neutral. Internal controls deal with any material internal control deficiencies that affect the validity of the financial data. We recognize that there has been a lawsuit filed by an investor arguing that Lululemon failed to report deficiencies with its Yoga pants material. Since the court in 2015 dismissed the case (Stempel, 2015), and we are not aware of similar cases, we assess this subfactor as neutral. The last governance subfactor is assessed as neutral, as well. The financial statements are prepared according to generally accepted accounting standards, complying with the US Security and Exchange Commission. They allow for a fair understanding of the economics of the business and do not obfuscate transactions or strategic intentions, in our opinion.

Accumulating the scores of the subfactors, we assess each one as neutral, except strategic positioning. Following S&P methodology on the management and governance modifier, this evaluation qualifies for an overall modifier assessment of (4) fair. Thus, there is no movement of the anchor rating, according to S&P's corporate methodology. Therefore, our final anchor rating, before applying the last modifier, stays at bbb-.

### 3.5 Comparable Ratings Analysis

The comparable ratings modifier is the last piece of the puzzle to assess an issuers SACP. By evaluating the issuer in a holistic way, it has the potential to move the anchor rating by one notch up or down or remain neutral. In fact, S&P sees this modifier changing the anchor rating as common rather than as an exception, as it aggregates the characteristics of a company relevant to its creditworthiness and allows for a 'fine-tuning'. The reason for this is that S&P considers its assessment of all the subfactors throughout the rating process to be points along a possible range of scores. Hence, if we believe a substantial majority of the assessments lie within the upper or lower end of the range, we could raise or lower the rating accordingly.

S&P's corporate methodology provides various areas which might be relevant for a movement in the anchor rating. After running through the rating process and assessing Lululemon's market position against its peers, we do see reason to adjust our rating. Going back to the grid in appendix 15, we do see significant risk in Lululemon's BPR that does not justify a rating that is higher by two notches compared to close competitors such as Under Armour (BBB- versus BB). In our opinion, this stems from the industry and macroeconomic trends. As already discussed in chapter 2.1.1, the retail industry is exposed to intermediate risk driven by cyclicality. We believe that this effect is stronger for Lululemon than for its peers. The reason for this is that virtually non-existing switching costs leave the company more exposed to economic turmoil when relative household incomes decline and consumer spending is cut back. By charging high prices on its fitness gear, we expect during recessions many consumers to switch to cheaper alternatives, cutting into its revenues. There might be long-term effects as well. McKinsey found that consumer switching to cheaper consumer products during recessions are likely to stay with those, even when the economy picks up again. Exceeding expectations of product performance lead 34% of switching consumers to stay with the lower priced alternative (Bohlen, Carlotti, Mihas, & Welch, 2009). The resulting revenue declines from permanently losing customers could lead to insufficient cash flows, also in the long-run, to serve its financial obligations.

Moreover, we also believe that significant business risk comes from its large competitors. Retailing giants like Nike have substantial financing advantages over Lululemon’s comparably small capabilities. For now, we assess Lululemon’s market positioning in serving a niche as good. Nevertheless, with global Yoga trends looking prosperous, it is not unlikely that its competitors might want to cut into Lululemon’s target group. We believe that especially Nike, owning significant brand strength, could overhaul Lululemon’s growth aspiration by offering similar high-quality Yoga wear and simultaneously charging lower prices. Greater bargaining power with its suppliers, as well as a significantly higher degree of product diversification and more sophisticated financial capabilities are the main reason for this. Hence, we also see the potential of Lululemon being pushed out of its markets by better equipped peers.

In our opinion, both factors are not adequately captured in the BRP analysis, which is why we see substantial reasons to move down the anchor rating by one notch, brining Lululemon’s SACP closer to its peers at bb+.

## 4. Lululemon’s ICR

The last step to determine the ICR of a corporate entity is to look at potential group or government influence that might raise or lower the SACP to arrive at the final ICR. The relevant criteria for group influence are only applicable for corporate entities that are part of a group and are directly or indirectly controlled by a different entity. S&P defines control as exerting substantial influence on another company’s cash flows (Brennan, 2013). We do not see such conditions to be prevailing in Lululemon’s case.

Further, S&P’s criteria on governmental influence on an issuer set out that such entities are expected to receive benefits from their government in stress scenarios or could be subject to unfavorable governmental interventions due to close links (Trask & Katz, 2015). Again, we see no evidence Lululemon might fall under either criterion. Hence, we see neither positive nor negative group or government influence on Lululemon’s creditworthiness. Therefore, we assess Lululemon’s final ICR as BB+.

**References**

Abercrombie & Fitch. (2018). *Annual Report 2017*. Retrieved from http://corporate.abercrombie.com/investors/financials-sec-filings/annual-reports-proxy/annual-reports

Atsmon, Y., Magni, M., Li, L., & Wenkan, L. (2012). *Meet the 2020 Chinese Consumer*. *McKinsey Quarterly*. Retrieved from https://www.mckinsey.com/~/media/mckinsey/featured insights/asia pacific/meet the chinese consumer of 2020/mckinseyinsightschina meetthe2020chineseconsumer.ashx

Bohlen, B., Carlotti, S., Mihas, L., & Welch, N. (2009). *How the recession has changed US consumer behavior*. Chicago. Retrieved from https://www.mckinsey.com/industries/consumer-packaged-goods/our-insights/how-the-recession-has-changed-us-consumer-behavior

Brennan, M. (2013). *Group Rating Methodology*. Retrieved from http://www.maalot.co.il/publications/MT20131127143756.pdf

Federal Reserve Bank of Saint Louis. (2018a). ICE BofAML US High Yield BB Effective Yield. Retrieved from https://fred.stlouisfed.org/series/BAMLH0A1HYBBEY

Federal Reserve Bank of Saint Louis. (2018b). ICE BofAML US High Yield BB Option-Adjusted Spread. Retrieved from https://fred.stlouisfed.org/series/BAMLH0A1HYBB

G-III Apparel Group Ltd. (2018). *2017 Annual Report & Form 10-K*. Retrieved from http://ir.g-iii.com/financial-information/annual-reports

IMF. (2018). Real GDP Growth. Retrieved from https://www.imf.org/external/datamapper/NGDP_RPCH@WEO/OEMDC/ADVEC/WEOWORLD

Ipsos Public Affairs. (2016). *2016 Yoga in America Study*. *Yoga Journal*. Retrieved from https://www.yogajournal.com/page/yogainamericastudy

Lululemon Athletica Inc. (2013). *2013 Annual Report*. Vancouver. Retrieved from http://investor.lululemon.com/static-files/07f68802-62d8-4dd6-b7c1-a94c58ca7ea3

Lululemon Athletica Inc. (2015). *2014 Annual Report*. Vancouver. Retrieved from http://investor.lululemon.com/static-files/f2152db4-f283-4df3-9903-7c474e47a4d5

Lululemon Athletica Inc. (2016). *2015 Annual Report*. Vancouver. Retrieved from http://investor.lululemon.com/static-files/c658bbac-1992-4d60-864a-5951f90debb1

Lululemon Athletica Inc. (2017). *2016 Annual Report*. Vancouver. Retrieved from http://investor.lululemon.com/static-files/56e5b5ae-5446-4693-8644-24f75098eabb

Lululemon Athletica Inc. (2018a). *2017 Annual Report*. Vancouver. Retrieved from http://investor.lululemon.com/static-files/0276c109-3f06-4d9e-9c06-b26dfc50c525

Lululemon Athletica Inc. (2018b). *Lululemon Athletica Inc. announces 4th Quarter and full year fiscal 2008 results*. Retrieved from http://investor.lululemon.com/releasedetail.cfm?ReleaseID=373422

Lululemon Athletica Inc. (2018c). *Lululemon Athletica Inc. Appoints Calvin McDonald Chief Executive Officer*.

Lululemon Athletica Inc. (2018d). *Lululemon Athletica Inc. CEO Laurent Potdevin Resigns*.

Lululemon Athletica Inc. (2018e). *Lululemon Athletica Names Patrick Guido Chief Financial Officer*.

Lundberg, D., Altberg, M., & Puccia, M. (2013). *Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers*. Retrieved from https://www.spratings.com/scenario-builder-portlet/pdfs/MethodologyAssumptionsLiquidityDescriptorsForGlobalCorporateIssuers.pdf

NASDAQ. (2018). Lululemon Athletica Inc. Ownership Summary. Retrieved from https://www.nasdaq.com/symbol/lulu/ownership-summary

Nike Inc. (2018). *2018 Form 10-K*. Retrieved from https://investors.nike.com/investors/news-events-and-reports/?toggle=events

OCED. (2018). *Economic Outlook 2018*. Retrieved from http://www.oecd.org/eco/outlook/

Puccia, M., Collett, L., Kernan, P., Palmer, A., Buet, G., Mettrick, M., & Deslondes, G. (2013). *Corporate Methodology*. Retrieved from https://www.spratings.com/scenario-builder-portlet/pdfs/CorporateMethodology.pdf

Puccia, M., Daicoff, C., Kalinina, O., Wood, D., Bodek, D., & Scerbo, M. (2013). *Methodology: Industry Risk*. Retrieved from https://www.spratings.com/scenario-builder-portlet/pdfs/IndustryRisk.pdf

Puccia, M., Kernan, P., Collett, L., Grimando, L., Holland, S., & Solak, M. (2013). *Corporate Methodology: Ratios and Adjustments*. Retrieved from http://www.maalot.co.il/publications/MT20131127143756a.pdf

Samson, S., Bukspan, N., & Dubois-Pelerin, E. (2007). *Standard & Poor's Encyclopedia Of Analytical Adjustments For Corporate Entities*. Retrieved from https://www.nact.org/sponsorPubs/S&P_encyclopedia_of_analytical_adjustments.pdf

Scerbo, M. F., & Wood, D. P. (2013). *Standard & Poor's Assigns Industry Risk Assessments To 38 Nonfinancial Corporate Industries*.

Schulz, R., Ratnam, R., Yoshimura, M., Puccia, M., & Kernan, P. (2013). *Key Credit Factors for the Retail and Restaurants Industry*.

Statista. (2018a). Annual Per Capita Disposable Income of Rural and Urban Households in China from 1990 to 2016. Retrieved from https://www.statista.com/statistics/259451/annual-per-capita-disposable-income-of-rural-and-urban-households-in-china/

Statista. (2018b). United States Apparel Market Forecast. Retrieved from https://www.statista.com/outlook/90000000/109/apparel/united-states?kw=united states apparel market&crmtag=adwords&gclid=Cj0KCQjw_7HdBRDPARIsAN_ltcLpL3QuGzmEqdetmM-L5Fg4IlRuVqJ-QikU_ryu4KeuGUk1eM5NrI8aAjjiEALw_wcB#market-arpu

Stempel, J. (2015, May 15). Lululemon yoga pants lawsuit properly dismissed: U.S. appeals court. *Reuters*. Retrieved from https://www.reuters.com/article/us-lululemon-lawsuit-yogapants-idUSKBN0O01UN20150515

The Gap Inc. (2018). *2017 Annual Report*. Retrieved from http://investors.gapinc.com/phoenix.zhtml?c=111302&p=irol-reportsAnnual

Thompson, I., Collett, L., Guadagnuolo, L., & Herrera, F. (2009). *Understanding Standard & Poor's Rating Definitions*. Retrieved from https://www.spratings.com/documents/20184/774196/Understanding+Standard+%26+Poor%27s+Rating+Definitions/b2ca0e9d-1162-4a0f-ae1b-03847c9fba37

Thomson Reuters. (2007). LuLulemon's IPO Prices at $18/Share - Underwriter. Retrieved from https://www.reuters.com/article/lululemon-ipo-idUSWEN980820070726

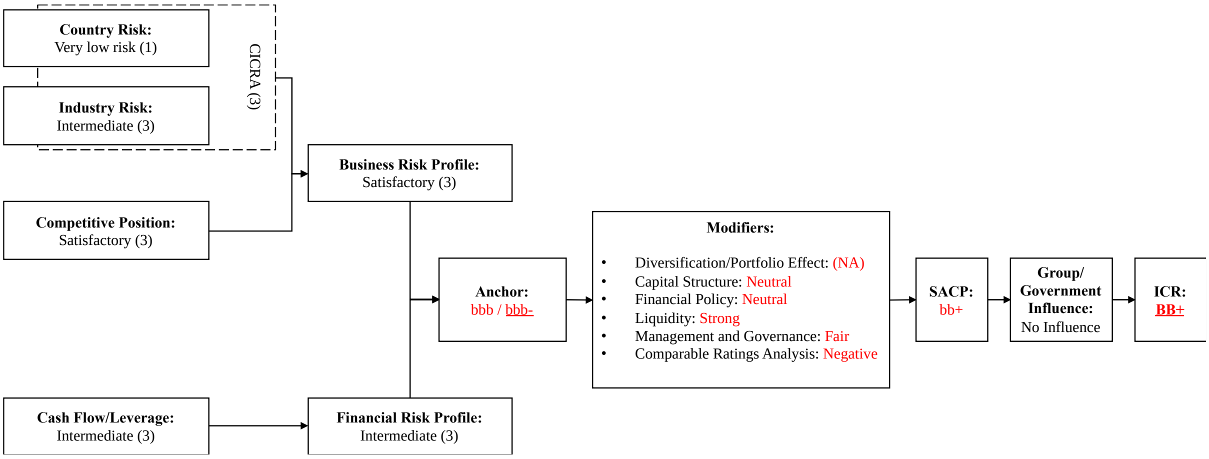
Trask, T. J., & Katz, L. J. F. (2015). *Rating Government-Related Entities : Methodology And Assumptions*. Retrieved from http://www.maalot.co.il/publications/GMT20150329155054.pdf

Under Armour Inc. (2018). *Annual Report 2017*. Retrieved from http://investor.underarmour.com/financial-information/annual-reports

Woodell, C., Puccia, M., Dreyer, S., & Hazell, L. (2012). *Methodology: Management and Governance Credit Factors for Corporate Entities and Issuers*. Retrieved from http://www.standardandpoors.com/spf/upload/Ratings_US/Managment_Governance_Criteria.pdf

# Appendices

## Appendix 1: S&P's Corporate Methodology framework




## Appendix 2: Year-on-year consolidated income statement

| ***Income Statement - Lululemon Athletica Inc.*** | | | | | |
|---|---|---|---|---|---|
| ***Consolidated Statement of Income (in thousand USD)*** | **FY 13** | **FY 14** | **FY 15** | **FY 16** | **FY 17** |
| **Net Revenues** | **$ 1.591.188** | **$ 1.797.213** | **$ 2.060.523** | **$ 2.344.392** | **$ 2.649.181** |
| *Company-operated stores* | *$ 1.228.999* | *$ 1.348.225* | *$ 1.516.323* | *$ 1.704.357* | *$ 1.837.065* |
| *Direct to Consumer* | *$ 263.083* | *$ 321.180* | *$ 401.525* | *$ 453.287* | *$ 577.590* |
| *Other* | *$ 99.106* | *$ 127.808* | *$ 142.675* | *$ 186.748* | *$ 234.526* |
| Cost of Goods Sold | $ 751.112 | $ 883.033 | $ 1.063.357 | $ 1.144.775 | $ 1.250.391 |
| GrossProfit | $ 840.076 | $ 914.180 | $ 997.166 | $ 1.199.617 | $ 1.398.790 |
| *Gross Margin* | *53%* | *51%* | *48%* | *51%* | *53%* |
| SG&A Expenses | $ 448.718 | $ 538.147 | $ 628.090 | $ 778.465 | $ 904.264 |
| Asset Impairement & Restructering Costs | $ - | $ - | $ - | $ - | $ 38.525 |
| **Income from Operations** | **$ 391.358** | **$ 376.033** | **$ 369.076** | **$ 421.152** | **$ 456.001** |
| *EBIT Margin* | *25%* | *21%* | *18%* | *18%* | *17%* |
| Other Income/Expense, Net | $ 5.768 | $ 7.102 | $ -581 | $ 1.577 | $ 3.997 |
| Income before Income Tax | $ 397.126 | $ 383.135 | $ 368.495 | $ 422.729 | $ 459.998 |
| Income Tax Expense | $ 117.579 | $ 144.102 | $ 102.448 | $ 119.348 | $ 201.336 |
| **Net Income** | **$ 279.547** | **$ 239.033** | **$ 266.047** | **$ 303.381** | **$ 258.662** |
| *Profit Margin* | *18%* | *13%* | *13%* | *13%* | *10%* |
| | | | | | |
| Other Comprehensive Income/Loss, Net of Tax: | | | | | |
| Foreign Currency Translation Adjustment | $ -89.158 | $ -105.339 | $ -64.796 | $ 36.703 | $ 58.577 |
| Conprehensive Income | $ 190.389 | $ 133.694 | $ 201.251 | $ 340.084 | $ 317.239 |

## Appendix 3: January 31st year-on-year balance sheet

| *Balance Sheet as of January 31, 2018 - Lululemon Athletica Inc.* | | | | | |
|---|---|---|---|---|---|
| ***Assets (in thousand USD)*** | **Jan 31, 2014** | **Jan 31, 2015** | **Jan 31, 2016** | **Jan 31, 2017** | **Jan 31, 2018** |
| Current Assets | $ 945.539 | $ 951.012 | $ 917.039 | $ 1.162.737 | $ 1.436.282 |
| Cash and Cash Equivalents | $ 698.649 | $ 664.479 | $ 501.482 | $ 734.846 | $ 990.501 |
| Accounts Receivable | $ 11.903 | $ 13.746 | $ 13.108 | $ 9.200 | $ 19.173 |
| Inventories | $ 188.790 | $ 208.116 | $ 284.009 | $ 298.432 | $ 329.562 |
| Prepaid and Receivable Income Taxes | $ 46.197 | $ 40.547 | $ 91.453 | $ 81.190 | $ 48.948 |
| Other Prepaid Expenses and Current Assets | $ - | $ 24.124 | $ 26.987 | $ 39.069 | $ 48.098 |
| Non-Current Assets | $ 306.849 | $ 345.201 | $ 397.038 | $ 494.804 | $ 562.201 |
| Property and Equipment, Net | $ 255.603 | $ 296.008 | $ 349.605 | $ 423.499 | $ 473.642 |
| Goodwill and Intangible Assets, Net | $ 28.201 | $ 26.163 | $ 24.777 | $ 24.557 | $ 24.679 |
| Deferred Income Tax Assets | $ 18.300 | $ 16.018 | $ 11.802 | $ 26.256 | $ 32.491 |
| Other Non-Current Assets | $ 4.745 | $ 7.012 | $ 10.854 | $ 20.492 | $ 31.389 |
| **Total Assets** | **$ 1.252.388** | **$ 1.296.213** | **$ 1.314.077** | **$ 1.657.541** | **$ 1.998.483** |
| ***Liabilities and Stockholder's Equity (in thousand USD)*** | | | | | |
| Current Liabilities | $ 116.214 | $ 159.881 | $ 225.504 | $ 241.990 | $ 292.598 |
| Accounts Payable | $ 12.647 | $ 9.339 | $ 10.381 | $ 24.846 | $ 24.646 |
| Accrued Inventory Liabilities | $ 15.415 | $ 22.296 | $ 25.451 | $ 8.601 | $ 13.027 |
| Accrued Compensation and Related Expenses | $ 19.445 | $ 29.932 | $ 43.524 | $ 55.238 | $ 70.141 |
| Current Income Taxes Payable | $ 769 | $ 20.073 | $ 37.736 | $ 30.290 | $ 15.700 |
| Unredeemed Gift Card Liability | $ 38.343 | $ 46.252 | $ 57.736 | $ 70.454 | $ 82.668 |
| Lease Termination Liabilities | $ - | $ - | $ - | $ - | $ 6.427 |
| Other Current Liabilities | $ 29.595 | $ 31.989 | $ 50.676 | $ 52.561 | $ 79.989 |
| Non-Current Liabilities | $ 39.492 | $ 46.764 | $ 61.091 | $ 55.578 | $ 108.925 |
| Non-Current Income Tax Payable | $ - | $ - | $ - | $ - | $ 48.268 |
| Deferred Income Tax Liabilites | $ 3.977 | $ 3.633 | $ 10.759 | $ 7.262 | $ 1.336 |
| Other Non-Current Liabilities | $ 35.515 | $ 43.131 | $ 50.332 | $ 48.316 | $ 59.321 |
| Total Liabilities | $ 155.706 | $ 206.645 | $ 286.595 | $ 297.568 | $ 401.523 |
| Stockholder' Equity | $ 1.096.682 | $ 1.089.568 | $ 1.027.482 | $ 1.359.973 | $ 1.596.960 |
| Undesignated Preferred Stock | $ - | $ - | $ - | $ - | $ - |
| Exchangeable Stock | $ - | $ - | $ - | $ - | $ - |
| Special Voting Stock | $ - | $ - | $ - | $ - | $ - |
| Common Stock | $ 577 | $ 661 | $ 637 | $ 637 | $ 628 |
| Additional Paid-In Capital | $ 240.351 | $ 241.695 | $ 245.533 | $ 266.622 | $ 284.253 |
| Retained Earnings | $ 923.822 | $ 1.020.619 | $ 1.019.515 | $ 1.294.214 | $ 1.455.002 |
| Accumulated Other Comprehensive Loss | $ -68.068 | $ -173.407 | $ -238.203 | $ -201.500 | $ -142.923 |
| **Total Liabilities and Stockholder's Equity** | **$ 1.252.388** | **$ 1.296.213** | **$ 1.314.077** | **$ 1.657.541** | **$ 1.998.483** |

## Appendix 4: Determining the issuer anchor rating

| | **Financial risk profile** | | | | | |
|---|---|---|---|---|---|---|
| **Business risk profile** | **1 (minimal)** | **2 (modest)** | **3 (intermediate)** | **4 (significant)** | **5 (aggressive)** | **6 (highly leveraged)** |
| **1 (excellent)** | aaa/aa+ | aa | a+/a | a- | bbb | bbb-/bb+ |
| **2 (strong)** | aa/aa- | a+/a | a-/bbb+ | bbb | bb+ | bb |
| **3 (satisfactory)** | a/a- | bbb+ | bbb/bbb- | bbb-/bb+ | bb | b+ |
| **4 (fair)** | bbb/bbb- | bbb- | bb+ | bb | bb- | b |
| **5 (weak)** | bb+ | bb+ | bb | bb- | b+ | b/b- |
| **6 (vulnerable)** | bb- | bb- | bb-/b+ | b+ | b | b- |

## Appendix 5: Determining the CICRA and the industry risk assessment

| | **Country risk assessment** | | | | | |
|---|---|---|---|---|---|---|
| **Industry risk assessment** | **1 (very low risk)** | **2 (low risk)** | **3 (intermediate risk)** | **4 (moderately high risk)** | **5 (high risk)** | **6 (very high risk)** |
| **1 (very low risk)** | 1 | 1 | 1 | 2 | 4 | 5 |
| **2 (low risk)** | 2 | 2 | 2 | 3 | 4 | 5 |
| **3 (intermediate risk)** | 3 | 3 | 3 | 3 | 4 | 6 |
| **4 (moderately high risk)** | 4 | 4 | 4 | 4 | 5 | 6 |
| **5 (high risk)** | 5 | 5 | 5 | 5 | 5 | 6 |
| **6 (very high risk)** | 6 | 6 | 6 | 6 | 6 | 6 |

| | **Competitive risk and growth assessment** | | | | | |
|---|---|---|---|---|---|---|
| **Cyclicality assessment** | **1 (very low risk)** | **2 (low risk)** | **3 (intermediate risk)** | **4 (moderately high risk)** | **5 (high risk)** | **6 (very high risk)** |
| **1 (very low risk)** | 1 | 2 | 3 | 4 | 5 | 6 |
| **2 (low risk)** | 1 | 2 | 3 | 4 | 5 | 6 |
| **3 (intermediate risk)** | 2 | 2 | 3 | 4 | 4 | 6 |
| **4 (moderately high risk)** | 3 | 3 | 3 | 4 | 5 | 6 |
| **5 (high risk)** | 3 | 4 | 4 | 5 | 5 | 6 |
| **6 (very high risk)** | 4 | 4 | 5 | 5 | 6 | 6 |

## Appendix 6: Peer group comparison of operating efficiency metrics

| *Gross margin* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 53,9% | 50,9% | 48,4% | 51,2% | 53,1% |
| Nike Inc. | 44,8% | 46,0% | 46,2% | 44,6% | 43,8% |
| Under Armour Inc. | 49,0% | 48,1% | 46,4% | 45,1% | 45,4% |
| G-III Apparel Group Ltd. | 34,0% | 35,8% | 35,8% | 35,2% | 37,6% |
| The Gap Inc. | 39,0% | 38,3% | 36,4% | 36,3% | 38,2% |
| Abercrombie & Fitch Co. | 62,6% | 61,8% | 61,3% | 61,0% | 59,7% |

| *Accounts receivable in days* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 2,1 | 2,6 | 2,4 | 1,4 | 2,6 |
| Nike Inc. | 43,0 | 40,5 | 37,3 | 36,8 | 36,0 |
| Under Armour Inc. | 29,0 | 32,9 | 40,1 | 45,2 | 51,9 |
| G-III Apparel Group Ltd. | 35,9 | 30,7 | 32,5 | 37,2 | 36,3 |
| The Gap Inc. | 8,9 | 8,2 | 6,4 | 7,2 | 7,2 |
| Abercrombie & Fitch Co. | 7,4 | 5,9 | 5,7 | 8,2 | 9,2 |

| *SGA as % of sales* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 29,3% | 30,3% | 31,1% | 32,9% | 34,4% |
| Nike Inc. | 31,5% | 32,3% | 32,3% | 30,8% | 31,6% |
| Under Armour Inc. | 37,3% | 37,4% | 37,5% | 41,8% | 41,5% |
| G-III Apparel Group Ltd. | 25,6% | 27,0% | 26,8% | 29,2% | 29,7% |
| The Gap Inc. | 25,8% | 25,7% | 26,0% | 27,0% | 29,6% |
| Abercrombie & Fitch Co. | 57,7% | 57,6% | 58,4% | 61,3% | 57,2% |

| *Days inventory outstanding* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 85,3 | 81,8 | 84,2 | 95,2 | 96,2 |
| Nike Inc. | 88,3 | 91,4 | 96,5 | 94,8 | 92,1 |
| Under Armour Inc. | 116,7 | 117,0 | 120,4 | 138,6 | 134,8 |
| G-III Apparel Group Ltd. | 103,2 | 105,5 | 110,5 | 114,7 | 108,0 |
| The Gap Inc. | 68,1 | 68,5 | 68,2 | 68,2 | 72,5 |
| Abercrombie & Fitch Co. | 113,0 | 126,1 | 120,0 | 117,3 | 108,5 |

| *Same - store sales growth* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 9,0% | 3,0% | 10,0% | 7,0% | 7,0% |
| Nike Inc. | 10,0% | 16,0% | 10,0% | 7,0% | 4,0% |
| Under Armour Inc. | *NA* | *NA* | *NA* | *NA* | *NA* |
| G-III Apparel Group Ltd. | *NA* | *NA* | -14,2% | -1,7% | *NA* |
| The Gap Inc. | 2,0% | *NA* | -4,0% | -2,0% | 3,0% |
| Abercrombie & Fitch Co. | -11,0% | -8,0% | -3,0% | NA | NA |

| *Accounts payble in days* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 3,2 | 4,4 | 3,2 | 7,9 | 7,2 |
| Nike Inc. | 40,2 | 43,1 | 44,2 | 40,2 | 38,2 |
| Under Armour Inc. | 41,8 | 32,5 | 41,1 | 59,6 | 46,2 |
| G-III Apparel Group Ltd. | 35,4 | 39,1 | 40,6 | 46,4 | 45,1 |
| The Gap Inc. | 43,3 | 43,5 | 41,5 | 43,6 | 45,2 |
| Abercrombie & Fitch Co. | 30,0 | 36,4 | 44,4 | 53,6 | 46,1 |

| *Sales per square feet* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | $ 1.894 | $ 1.678 | $ 1.541 | $ 1.521 | $ 1.554 |
| Nike Inc. | $ 509 | $ 508 | $ 535 | $ 542 | $ 543 |
| Under Armour Inc. | $ 829 | $ 702 | $ 611 | $ 549 | $ 541 |
| G-III Apparel Group Ltd. | *NA* | *NA* | *NA* | *NA* | *NA* |
| The Gap Inc. | $ 365 | $ 361 | $ 337 | $ 334 | $ 340 |
| Abercrombie & Fitch Co. | $ 417 | $ 381 | $ 360 | $ 343 | $ 359 |

| *Cash conversion cycle* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 84,2 | 80,0 | 83,4 | 88,7 | 91,6 |
| Nike Inc. | 91,1 | 88,8 | 89,6 | 91,4 | 89,8 |
| Under Armour Inc. | 103,9 | 117,4 | 119,4 | 124,3 | 140,5 |
| G-III Apparel Group Ltd. | 103,7 | 97,0 | 102,4 | 105,5 | 99,2 |
| The Gap Inc. | 33,7 | 33,1 | 33,1 | 31,9 | 34,6 |
| Abercrombie & Fitch Co. | 90,4 | 95,5 | 81,3 | 71,9 | 71,7 |

| *EBITDA Margin* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 27,7% | 23,8% | 20,9% | 22,1% | 22,7% |
| Nike Inc. | 15,3% | 15,8% | 16,0% | 15,9% | 14,3% |
| Under Armour Inc. | 13,8% | 12,9% | 11,7% | 6,6% | 6,8% |
| G-III Apparel Group Ltd. | 8,4% | 8,8% | 9,0% | 6,0% | 7,1% |
| The Gap Inc. | 16,5% | 16,0% | 14,2% | 13,1% | 12,6% |
| Abercrombie & Fitch Co. | 10,8% | 10,5% | 9,1% | 6,0% | 8,3% |

| *Inventory turnover* | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Lululemon Athletica Inc. | 4,3 | 4,4 | 4,3 | 3,9 | 4,0 |
| Nike Inc. | 4,1 | 4,0 | 3,8 | 3,8 | 4,0 |
| Under Armour Inc. | 3,1 | 3,1 | 3,0 | 2,6 | 2,7 |
| G-III Apparel Group Ltd. | 3,5 | 3,5 | 3,3 | 3,2 | 3,4 |
| The Gap Inc. | 5,3 | 5,3 | 5,3 | 5,3 | 5,1 |
| Abercrombie & Fitch Co. | 3,2 | 2,9 | 3,0 | 3,1 | 3,4 |

## Appendix 7: EBITDA adjustments and margin

| *in millions* | **EBITDA adjustments for leasing and stock compensation ependitures** | | | | |
|---|---|---|---|---|---|
| | **2016** | **2017** | **2018** | **2019** | **2020** |
| Revenues | $ 2.344,4 | $ 2.649,2 | $ 2.998,9 | $ 3.307,8 | $ 3.582,3 |
| EBITDA, reported | $ 517,1 | $ 602,7 | $ 644,4 | $ 667,9 | $ 676,5 |
| Leasing expenses | $ 113,2 | $ 131,2 | $ 152,9 | $ 170,7 | $ 186,5 |
| Stock compensation expenses | $ 16,8 | $ 17,6 | $ 21,0 | $ 23,1 | $ 25,0 |
| EBITDA, adjusted | $ 647,1 | $ 751,5 | $ 818,3 | $ 861,7 | $ 888,0 |
| **EBITDA margin** | **27,6%** | **28,4%** | **27,3%** | **26,1%** | **24,8%** |

## Appendix 8: Regressing EBITDA on time

| EBITDA (in millions) | Time |
|---|---|
| $ 317,2 | 1 |
| $ 487,6 | 2 |
| $ 515,0 | 3 |
| $ 512,9 | 4 |
| $ 535,7 | 5 |
| $ 647,1 | 6 |
| $ 751,5 | 7 |

| *Regression Statistics* | |
|---|---|
| Multiple R | 0,936204992 |
| R Square | 0,876479787 |
| Adjusted R Squ | 0,851775744 |
| Standard Error | 52,11537475 |
| Observations | 7 |

ANOVA

| | *df* | *SS* | *MS* | *F* | *Significance F* |
|---|---|---|---|---|---|
| Regression | 1 | 96361,95571 | 96361,95571 | 35,47920465 | 0,00190728 |
| Residual | 5 | 13580,06143 | 2716,012286 | | |
| Total | 6 | 109942,0171 | | | |

| | *Coefficients* | *Standard Error* | *t Stat* | *P-value* | *Lower 95%* | *Upper 95%* | *Lower 95,0%* | *Upper 95,0%* |
|---|---|---|---|---|---|---|---|---|
| Intercept | 303,4857143 | 44,04553071 | 6,89027262 | 0,000985796 | 190,2630731 | 416,7083555 | 190,2630731 | 416,7083555 |
| Time | 58,66428571 | 9,848880077 | 5,956442281 | 0,00190728 | 33,34693349 | 83,98163794 | 33,34693349 | 83,98163794 |

## Appendix 9: Assessing profitability and competitive position

| | **Volatility of profitability assessment** | | | | | |
|---|---|---|---|---|---|---|
| **Level of profitability assessment** | **1** | **2** | **3** | **4** | **5** | **6** |
| Above Average | 1 | 1 | 2 | 3 | 4 | 5 |
| Average | 1 | 2 | 3 | 4 | 5 | 6 |
| Below Average | 2 | 3 | 4 | 5 | 6 | 6 |

| | **Preliminary competitive position** | | | | | |
|---|---|---|---|---|---|---|
| **Profitability assessment** | **1** | **2** | **3** | **4** | **5** | **6** |
| **1** | 1 | 2 | 2 | 3 | 4 | 5 |
| **2** | 1 | 2 | 3 | 3 | 4 | 5 |
| **3** | 2 | 2 | 3 | 4 | 4 | 5 |
| **4** | 2 | 3 | 3 | 4 | 5 | 5 |
| **5** | 2 | 3 | 4 | 4 | 5 | 6 |
| **6** | 2 | 3 | 4 | 5 | 5 | 6 |

## Appendix 10: Defining the BRP

| | CICRA score | | | | | |
|---|---|---|---|---|---|---|
| **Competitive position assessment** | **1** | **2** | **3** | **4** | **5** | **6** |
| 1 (excellent) | 1 | 1 | 1 | 2 | 3 | 5 |
| 2 (strong) | 1 | 2 | 2 | 3 | 4 | 5 |
| 3 (satisfactory) | 2 | 3 | 3 | 3 | 4 | 6 |
| 4 (fair) | 3 | 4 | 4 | 4 | 5 | 6 |
| 5 (weak) | 4 | 5 | 5 | 5 | 5 | 6 |
| 6 (vulnerable) | 5 | 6 | 6 | 6 | 6 | 6 |

## Appendix 11: Historical and forecasted financial statements

***Lululemon Athletica Inc. - Income statement, year-on-year***

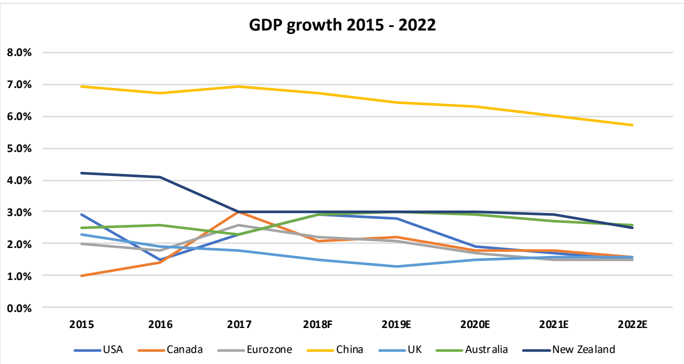
| *in USD millions - January 31st 2018* | **2016A** | **2017A** | **2018P** | **2019E** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|---|---|
| Revenues | 2.344,4 | 2.649,2 | 2.998,7 | 3.308,9 | 3.582,0 | 3.748,8 | 3.903,8 |
| *Growth* | *13,8%* | *13,0%* | *13,2%* | *10,3%* | *8,3%* | *4,7%* | *4,1%* |
| Cost of goods sold | (1.057,1) | (1.142,2) | (1.292,8) | (1.426,6) | (1.544,3) | (1.616,2) | (1.683,1) |
| **Gross Profit** | **1.287,3** | **1.507,0** | **1.705,9** | **1.882,3** | **2.037,7** | **2.132,6** | **2.220,7** |
| *Margin* | *54,9%* | *56,9%* | *56,9%* | *56,9%* | *56,9%* | *56,9%* | *56,9%* |
| SG&A & other expenses | (770,2) | (904,3) | (1.061,5) | (1.214,4) | (1.361,2) | (1.473,3) | (1.584,9) |
| Research and development expenses | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **EBITDA** | **517,1** | **602,7** | **644,4** | **667,9** | **676,5** | **659,3** | **635,8** |
| *Margin* | *22,1%* | *22,8%* | *21,5%* | *20,2%* | *18,9%* | *17,6%* | *16,3%* |
| Depreciation | (87,0) | (108,2) | (119,9) | (135,7) | (154,0) | (161,2) | (171,8) |
| Intangible amortization & valuation changes | (0,7) | (38,5) | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Operating Income** | **429,4** | **456,0** | **524,5** | **532,2** | **522,5** | **498,1** | **464,0** |
| *Margin* | *18,3%* | *17,2%* | *17,5%* | *16,1%* | *14,6%* | *13,3%* | *11,9%* |
| Finance / Interest income | 0,0 | 0,0 | 11,4 | 13,7 | 15,5 | 17,2 | 18,7 |
| Non-operating income (expense) & others | 3,3 | (3,3) | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **EBIT** | **432,7** | **452,7** | **535,9** | **545,9** | **538,0** | **515,3** | **482,7** |
| *Margin* | *18,5%* | *17,1%* | *17,9%* | *16,5%* | *15,0%* | *13,7%* | *12,4%* |
| Interest expense | (1,7) | 0,0 | (33,1) | (72,6) | (76,9) | (80,6) | (82,9) |
| Other income (expense) | (8,3) | 7,3 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Pre-tax income** | **422,7** | **460,0** | **502,8** | **473,3** | **461,1** | **434,7** | **399,8** |
| Income tax | (119,3) | (201,3) | (165,9) | (156,2) | (152,2) | (143,5) | (131,9) |
| Non-controlling interest / Minority interest & net items | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Net income from continuing operations** | **303,4** | **258,7** | **336,9** | **317,1** | **308,9** | **291,2** | **267,9** |
| Extraordinary items & discontinued operations | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Net income** | **303,4** | **258,7** | **336,9** | **317,1** | **308,9** | **291,2** | **267,9** |
| *Margin* | *12,9%* | *9,8%* | *11,2%* | *9,6%* | *8,6%* | *7,8%* | *6,9%* |

***Lululemon Athletica Inc. - Balance sheet, year-on-year***

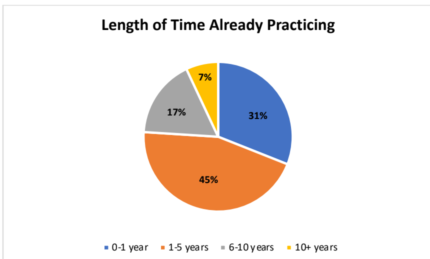
| *in USD millions - January 31st 2018* | **2016A** | **2017A** | **2018P** | **2019E** | **2020E** | **2021E** | **2022E** |
|---|---|---|---|---|---|---|---|
| Cash and cash equivalents | 734,9 | 990,5 | 1.288,1 | 1.466,5 | 1.643,3 | 1.808,4 | 1.956,9 |
| Short-term investments | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Receivables - trade | 9,2 | 19,2 | 19,7 | 21,8 | 23,6 | 24,7 | 25,7 |
| Inventories | 298,4 | 329,6 | 344,3 | 383,4 | 419,3 | 443,2 | 466,2 |
| Other current assets | 120,3 | 97,1 | 126,5 | 139,6 | 151,1 | 158,2 | 164,7 |
| **Current assets - total** | **1.162,7** | **1.436,3** | **1.778,7** | **2.011,3** | **2.237,2** | **2.434,5** | **2.613,5** |
| Property, plant and equipment, net | 423,5 | 473,6 | 530,6 | 593,5 | 661,5 | 736,5 | 814,6 |
| Investments and advances, equity & affiliates | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Investments and advances, other | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Intangible assets - total | 24,6 | 24,7 | 24,7 | 24,7 | 24,7 | 24,7 | 24,7 |
| Other assets | 46,8 | 63,9 | 63,9 | 63,9 | 63,9 | 63,9 | 63,9 |
| **Assets - total** | **1.657,6** | **1.998,5** | **2.397,9** | **2.693,3** | **2.987,3** | **3.259,6** | **3.516,7** |
| Account payable / creditors - trade | 24,9 | 24,7 | 26,9 | 30,9 | 35,1 | 38,5 | 42,4 |
| Income taxes payable | 30,3 | 15,7 | 15,7 | 15,7 | 15,7 | 15,7 | 15,7 |
| Other current liabilities - total | 186,3 | 252,3 | 284,1 | 341,6 | 402,8 | 458,7 | 520,6 |
| **Current liabilities - total** | **241,5** | **292,6** | **326,7** | **388,2** | **453,6** | **513,0** | **578,7** |
| Short- and long-term debt | 0,0 | 0,0 | 2.000,0 | 1.985,1 | 1.970,4 | 1.955,8 | 1.941,4 |
| Deferred taxes, liabilities | 7,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 | 1,3 |
| Reserves - untaxed | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Other long-term liabilities | 48,9 | 107,6 | 107,6 | 107,6 | 107,6 | 107,6 | 107,6 |
| **Liabilities - total** | **297,6** | **401,5** | **2.435,6** | **2.482,2** | **2.532,9** | **2.577,7** | **2.629,1** |
| Non-controlling interest / minority interest | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Equity-like instruments | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Common / ordinary equity - total | 1.360,0 | 1.597,0 | (37,8) | 211,1 | 454,4 | 681,9 | 887,6 |
| **Liabilities and shareholders' equity - total** | **1.657,6** | **1.998,5** | **2.397,9** | **2.693,3** | **2.987,3** | **3.259,6** | **3.516,7** |

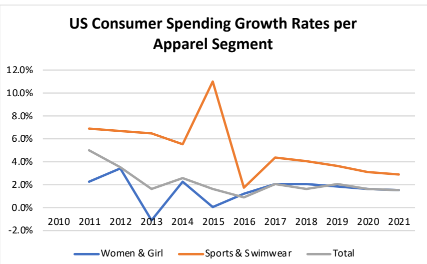
| *Lululemon Athletica Inc. - Cash flow statement, year-on-year* | | | | | | | |
|---|---|---|---|---|---|---|---|
| *in USD millions - January 31st 2018* | **2016A** | **2017A** | **2018P** | **2019E** | **2020E** | **2021E** | **2022E** |
| Income from continung operations | 303,4 | 258,7 | 335,3 | 315,8 | 307,6 | 290,0 | 266,7 |
| D&A, impairment & valuation charges | 87,7 | 108,2 | 120,0 | 135,7 | 154,0 | 161,2 | 171,8 |
| Stock compensation expense | 16,8 | 17,6 | 21,0 | 23,1 | 25,0 | 26,3 | 27,3 |
| Non-cash interest | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Equity method earnings (net dividends received) | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Deferred taxes | (18,2) | 0,7 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Others | (5,2) | (0,5) | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Cash flow from operations before change in WC** | **384,5** | **384,8** | **476,2** | **474,6** | **486,6** | **477,5** | **465,8** |
| | | | | | | | |
| Decrease (increase) in receivables | 0,0 | 0,0 | (0,5) | (2,0) | (1,8) | (1,1) | (1,0) |
| Decrease (increase) in inventories | (5,4) | (21,2) | (14,7) | (39,1) | (35,9) | (24,0) | (22,9) |
| Decrease (increase) in other current assets | 0,0 | 0,0 | (29,5) | (13,1) | (11,5) | (7,0) | (6,5) |
| Increase (decrease) in account payables / creditors | 14,1 | (1,6) | 2,3 | 4,0 | 4,2 | 3,4 | 3,9 |
| Increase (decrease) in other current liabilities | (8,1) | 127,4 | 31,8 | 57,5 | 61,2 | 56,0 | 61,9 |
| **Change in WC** | **0,6** | **104,6** | **(10,6)** | **7,2** | **16,2** | **27,3** | **35,3** |
| **Cash flow from operations (CFO)** | **385,1** | **489,4** | **465,6** | **481,8** | **502,9** | **504,7** | **501,1** |
| | | | | | | | |
| Capital expenditures (PP&E and certain intangibles) | (149,5) | (157,9) | (176,9) | (198,5) | (222,1) | (236,2) | (249,8) |
| **Free operating cash flow (FOCF)** | **235,6** | **331,5** | **288,7** | **283,3** | **280,8** | **268,6** | **251,2** |
| | | | | | | | |
| Cash dividends paid | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Equity-like instrument cash distributions | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Discretionary cash flow (DCF)** | **235,6** | **331,5** | **288,7** | **283,3** | **280,8** | **268,6** | **251,2** |
| | | | | | | | |
| Acquisitions | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Intangible assets - purchase | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Proceeds - sale of fixed assets | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Purchase of common and preferred stock | (29,3) | (100,3) | (2.000,0) | (100,0) | (100,0) | (100,0) | (100,0) |
| Sale of common and preferred stock | 6,9 | 5,6 | 9,0 | 10,0 | 10,7 | 11,2 | 11,7 |
| US decommissioning fund contributions | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Others | 20,2 | 18,8 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Cash flow available for debt repayment** | **233,4** | **255,7** | **(1.702,4)** | **193,3** | **191,5** | **179,8** | **162,9** |
| | | | | | | | |
| Issuance of debt | 0,0 | 0,0 | 2.000,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Repayment of amortized debt | 0,0 | 0,0 | 0,0 | (14,9) | (14,7) | (14,6) | (14,4) |
| Maturity of bullet and subordinated debt | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| **Net change in cash and short-term investments (A)** | **233,4** | **255,7** | **297,7** | **178,4** | **176,8** | **165,2** | **148,5** |
| | | | | | | | |
| Prior year cash and short-term investments | 501,5 | 734,9 | 990,5 | 1.288,1 | 1.466,5 | 1.643,3 | 1.808,4 |
| Excess portion from balance sheet (B) | 0,0 | 0,0 | 240,5 | 538,1 | 716,5 | 893,3 | 1.058,4 |
| Cash available for cash flow sweep (A+B=C) | 0,0 | 0,0 | 538,1 | 716,5 | 893,3 | 1.058,4 | 1.206,9 |
| Excess cash flow sweep (-C) | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 | 0,0 |
| Net change in cash after cash flow sweep | 0,0 | 0,0 | 297,6 | 178,4 | 176,8 | 165,2 | 148,5 |
| **End of year cash and short-term investments** | **734,9** | **990,5** | **1.288,2** | **1.466,5** | **1.643,3** | **1.808,4** | **1.957,0** |

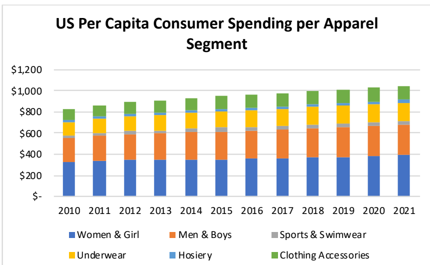
## Appendix 12: Relevant macroeconomic trends







## Appendix 13: Revenue forecast - front end

| *in USD thousands, except square feet* | 2016A | 2017A | 2018P | 2019E | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|---|---|
| **Revenues** | **2.344.392** | **2.649.181** | **2.998.687** | **3.308.878** | **3.581.983** | **3.748.766** | **3.903.807** |
| *Growth* | *13,8%* | *13,0%* | *13,2%* | *10,3%* | *8,3%* | *4,7%* | *4,1%* |
| Revenues from operated stores | 1.704.357 | 1.837.065 | 2.064.754 | 2.261.625 | 2.450.949 | 2.561.180 | 2.656.843 |
| *Growth* | *12,4%* | *7,8%* | *12,4%* | *9,5%* | *8,4%* | *4,5%* | *3,7%* |
| Online | 453.287 | 577.590 | 664.229 | 750.578 | 810.624 | 851.156 | 893.713 |
| *Growth* | *12,9%* | *27,4%* | *15,0%* | *13,0%* | *8,0%* | *5,0%* | *5,0%* |
| Other revenues | 186.748 | 234.526 | 269.705 | 296.675 | 320.409 | 336.430 | 353.251 |
| *Growth* | *30,9%* | *25,6%* | *15,0%* | *10,0%* | *8,0%* | *5,0%* | *5,0%* |
| **Sales per square feet** | **1.427** | **1.510** | **1.495** | **1.480** | **1.465** | **1.450** | **1.436** |
| *Growth* | *1,4%* | *5,8%* | *-1,0%* | *-1,0%* | *-1,0%* | *-1,0%* | *-1,0%* |
| **Total store square feet** | **1.194.046** | **1.216.848** | **1.381.481** | **1.528.488** | **1.673.172** | **1.766.083** | **1.850.554** |
| *Growth* | *10,8%* | *1,9%* | *13,5%* | *10,6%* | *9,5%* | *5,6%* | *4,8%* |
| Average square feet per store | 2.941 | 3.012 | 3.102 | 3.164 | 3.228 | 3.260 | 3.293 |
| *Growth* | *-0,9%* | *2,4%* | *3,0%* | *2,0%* | *2,0%* | *1,0%* | *1,0%* |
| **Number of stores** | **406** | **404** | **445** | **483** | **518** | **542** | **562** |
| *Growth* | *11,8%* | *-0,5%* | *10,2%* | *8,5%* | *7,3%* | *4,5%* | *3,7%* |
| Lululemon | 351 | 397 | 438 | 476 | 511 | 535 | 555 |
| *Growth* | *9,7%* | *13,1%* | *10,4%* | *8,6%* | *7,4%* | *4,6%* | *3,8%* |
| US | 246 | 270 | 292 | 306 | 318 | 328 | 338 |
| *Growth* | *7,0%* | *9,8%* | *8,0%* | *5,0%* | *4,0%* | *3,0%* | *3,0%* |
| Canada | 51 | 57 | 60 | 63 | 66 | 67 | 69 |
| *Growth* | *6,3%* | *11,8%* | *5,0%* | *5,0%* | *5,0%* | *2,0%* | *2,0%* |
| Europe | 11 | 13 | 16 | 18 | 20 | 22 | 23 |
| *Growth* | *57,1%* | *18,2%* | *20,0%* | *15,0%* | *12,0%* | *9,0%* | *4,0%* |
| APAC | 43 | 57 | 71 | 89 | 107 | 118 | 126 |
| *Growth* | *22,9%* | *32,6%* | *25,0%* | *25,0%* | *20,0%* | *10,0%* | *7,0%* |
| Ivivva | 55 | 7 | 7 | 7 | 7 | 7 | 7 |
| *Growth* | *27,9%* | *-87,3%* | *0,0%* | *0,0%* | *0,0%* | *0,0%* | *0,0%* |
| US | 42 | 4 | 4 | 4 | 4 | 4 | 4 |
| *Growth* | *35,5%* | *-90,5%* | *0,0%* | *0,0%* | *0,0%* | *0,0%* | *0,0%* |
| Canada | 13 | 3 | 3 | 3 | 3 | 3 | 3 |
| *Growth* | *8,3%* | *-76,9%* | *0,0%* | *0,0%* | *0,0%* | *0,0%* | *0,0%* |

## Appendix 14: Further assumptions for the financial forecast

| *in USD thousands* | 2016A | 2017A | 2018P | 2019E | 2020E | 2021E | 2022E |
|---|---|---|---|---|---|---|---|
| **Revenues** | **2.344.392** | **2.649.181** | **2.998.687** | **3.308.878** | **3.581.983** | **3.748.766** | **3.903.807** |
| *Growth* | *13,8%* | *13,0%* | *13,2%* | *10,3%* | *8,3%* | *4,7%* | *4,1%* |
| **CAPEX** | **149.511** | **157.864** | **176.923** | **198.533** | **222.083** | **236.172** | **249.844** |
| *as % of revenues* | *6,4%* | *6,0%* | *5,9%* | *6,0%* | *6,2%* | *6,3%* | *6,4%* |
| Company-operated stores | 75.304 | 80.240 | 89.961 | 99.266 | 111.041 | 116.212 | 121.018 |
| *as % of revenues* | *3,2%* | *3,0%* | *3,0%* | *3,0%* | *3,1%* | *3,1%* | *3,1%* |
| Online | 11.461 | 19.928 | 26.988 | 33.089 | 39.402 | 44.985 | 50.749 |
| *as % of revenues* | *0,5%* | *0,8%* | *0,9%* | *1,0%* | *1,1%* | *1,2%* | *1,3%* |
| Corporate | 62.746 | 57.696 | 59.974 | 66.178 | 71.640 | 74.975 | 78.076 |
| *as % of revenues* | *2,7%* | *2,2%* | *2,0%* | *2,0%* | *2,0%* | *2,0%* | *2,0%* |
| **Depreciation** | **87.697** | **108.235** | **121.302** | **136.118** | **152.265** | **161.925** | **171.298** |
| *as % of revenues* | *3,7%* | *4,1%* | *4,0%* | *4,1%* | *4,3%* | *4,3%* | *4,4%* |
| **Stock-based compensation** | **16.822** | **17.610** | **20.991** | **23.162** | **25.074** | **26.241** | **27.327** |
| *as % of revenues* | *0,7%* | *0,7%* | *0,7%* | *0,7%* | *0,7%* | *0,7%* | *0,7%* |
| **Sale of common & preffered stock** | **6.907** | **5.628** | **8.996** | **9.927** | **10.746** | **11.246** | **11.711** |
| *as % of revenues* | *0,3%* | *0,2%* | *0,3%* | *0,3%* | *0,3%* | *0,3%* | *0,3%* |

## Appendix 15: Peer comparison of BRP and FRP

| | **Financial Risk Profile** | | | | | |
|---|---|---|---|---|---|---|
| **Business Risk Profile** | **Minimal** | **Modest** | **Intermediate** | **Significant** | **Aggressive** | **Highly leveraged** |
| **Excellent** | | | | | | |
| **Strong** | Nike Inc. (AA-/Stable) | | | | | |
| **Satisfactory** | | | Lululemon Athletica Inc., (BB+/Stable) | | | |
| **Fair** | | | The Gap Inc., (BB+/Stable) | Under Armour Inc. (BB/Negative) G-III Aperal Group Ltd. (BB-/Positive) | | |
| **Weak** | | | | | Abercrombie & Fitch Co., (BB-/Stable) | |
| **Vulnerable** | | | | | | |

## Appendix 16: Cash flow and leverage analysis ratios

| Cash Flow/Leverage Analysis Ratios - Standard Volatility | | | | | | | |
|---|---|---|---|---|---|---|---|
| | Core ratios | | Supplementary coverage ratios | | Supplementary payback ratios | | |
| | FFO/Debt (%) | Debt/EBITDA (x) | FFO/Cash interest (x) | EBITDA/Interest (x) | CFO/Debt (%) | FOCF/Debt (%) | DCF/Debt (%) |
| Minimal | > 60 | < 1.5 | > 13 | > 15 | > 50 | > 40 | > 25 |
| Modest | 45 - 60 | 1.5 - 2 | 9 - 13 | 10 - 15 | 35 - 50 | 25 - 40 | 15 - 25 |
| Intermediate | 30 - 45 | 2 - 3 | 6 - 9 | 6 - 10 | 25 - 35 | 15 - 25 | 10 - 15 |
| Significant | 20 - 30 | 3 - 4 | 4 - 6 | 3 - 6 | 15 - 25 | 10 - 15 | 5 - 10 |
| Aggressive | 12 - 20 | 4 - 5 | 2 - 4 | 2 - 3 | 10 - 15 | 5 - 10 | 2 - 5 |
| Highly leveraged | < 12 | > 5 | < 2 | < 2 | < 10 | < 5 | < 2 |

## Appendix 17: Cash flow and leverage calculations

| *in millions* | Deriving EBITDA and FFO | | | | |
|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2019 | 2020 |
| Revenues | $ 2.344,4 | $ 2.649,2 | $ 2.998,9 | $ 3.307,8 | $ 3.582,3 |
| **EBITDA, reported** | **$ 517,1** | **$ 602,7** | **$ 644,4** | **$ 667,9** | **$ 676,5** |
| Leasing expenses | $ 113,2 | $ 131,2 | $ 152,9 | $ 170,7 | $ 186,5 |
| Stock compensation expenses | $ 16,8 | $ 17,6 | $ 21,0 | $ 23,1 | $ 25,0 |
| **EBITDA, adjusted** | **$ 647,1** | **$ 751,5** | **$ 818,3** | **$ 861,7** | **$ 888,0** |
| Income tax | $ -119,3 | $ -201,3 | $ -165,9 | $ -156,2 | $ -152,2 |
| Net interest expense | $ -1,7 | $ 0,0 | $ -21,7 | $ -58,9 | $ -61,4 |
| **Fund from operations (FFO)** | **$ 526,1** | **$ 550,2** | **$ 630,7** | **$ 646,6** | **$ 674,4** |
| Debt | $ 297,6 | $ 401,5 | $ 2.435,6 | $ 2.482,2 | $ 2.532,9 |
| Surplus cash (incl. 30% haircut) | $ -514,4 | $ -693,4 | $ -901,7 | $ -1.026,5 | $ -1.150,3 |
| **Net debt** | **$ -216,8** | **$ -291,8** | **$ 1.533,9** | **$ 1.455,7** | **$ 1.382,7** |
| Interest income | $ - | $ - | $ 11,4 | $ 13,7 | $ 15,5 |
| Interest expense | $ -1,7 | $ 0,0 | $ -33,1 | $ -72,6 | $ -76,9 |
| **Net interest** | **$ -1,7** | **$ 0,0** | **$ -21,7** | **$ -58,9** | **$ -61,4** |

## Appendix 18: Core and supplementary ratios

| | | Core ratios | | Supplementary ratios | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Weights** | **FFO/Debt** | **Debt/EBITDA** | **FFO/Interest** | **EBITDA/Interest** | **CFO/Debt** | **FOCF/Debt** | **DCF/Debt** |
| **FY16** | **0%** | -242,7% | -0,3 | 309,5 | 380,7 | -177,6% | -108,7% | -108,7% |
| **FY17** | **0%** | -188,5% | -0,4 | 86864,3 | 118644,3 | -159,5% | -113,6% | -113,6% |
| **FY18** | **30%** | 41,1% | 1,9 | 29,1 | 37,7 | 31,4% | 18,8% | 18,8% |
| **FY19** | **40%** | 44,4% | 1,7 | 11,0 | 14,6 | 34,5% | 19,5% | 19,5% |
| **FY20** | **30%** | 48,8% | 1,6 | 11,0 | 14,5 | 36,5% | 20,3% | 20,3% |
| **Weigted average ratio** | | **44,7%** | **1,7** | **16,4** | **21,5** | **34,2%** | **19,5%** | **19,5%** |
| **Score** | | **Intermediate** | **Modest** | **Minimal** | **Minimal** | **Intermediate** | **Intermediate** | **Modest** |

## Appendix 19: Capital structure assessment

| | Investments subfactor assessment | | |
|---|---|---|---|
| **Preliminary capital structure assessment** | **Neutral** | **Positive** | **Very positive** |
| **Neutral** | Neutral | Positive | Very positive |
| **Negative** | Negative | Neutral | Positive |
| **Very negative** | Very negative | Negative | Negative |

## Appendix 20: Analysis of the sources and uses of cash and the liquidity position

| | | Base case | | | | Strong | |
|---|---|---|---|---|---|---|---|
| *in USD millions - January 31st 2018* | | **12 months** | **24 months** | **36 months** | | **12 months** | **24 months** |
| EBITDA, reported | | 644,3 | 667,9 | 676,5 | | 451,0 | 467,6 |
| D&A, impairment & valuation changes | | 119,9 | 135,7 | 154,0 | | 119,9 | 135,7 |
| Cash interest expense | | (33,1) | (72,6) | (76,9) | | (33,1) | (72,6) |
| Cash FFO | | 476,2 | 474,5 | 486,6 | | 250,5 | 237,3 |
| **Sources of liquidity (A)** | | **3.475,7** | **1.779,8** | **1.980,0** | | **3.250,0** | **1.542,6** |
| Cash and liquid investments | | 990,5 | 1.288,1 | 1.466,5 | | 990,5 | 1.288,1 |
| Undrawn bank lines (maturing beyond 12 months) | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Undrawn short-term bank lines | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Cash FFO (if positive) | | 476,2 | 474,5 | 486,6 | | 250,5 | 237,3 |
| Working capital inflows | | 0,0 | 7,2 | 16,2 | | 0,0 | 7,2 |
| Asset sales | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Share issuances | | 9,0 | 10,0 | 10,7 | | 9,0 | 10,0 |
| Expected ongoing cash injection | | 2.000,0 | 0,0 | 0,0 | | 2.000,0 | 0,0 |
| **Uses of liquidity (B)** | | **(2.187,5)** | **(313,4)** | **(336,8)** | | **(2.187,5)** | **(539,1)** |
| Debt maturities - Long- and short-term | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Debt maturities - Amortization | | 0,0 | (14,9) | (14,7) | | 0,0 | (14,9) |
| Cash FFO (if negative) | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Change in cash estimate due to EBITDA decline | | 0,0 | 0,0 | 0,0 | | 0,0 | (225,7) |
| Working capital outflows (not seasonal) | | (10,6) | 0,0 | 0,0 | | (10,6) | 0,0 |
| Seasonal working capital reuqirement | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| CAPEX | | (176,9) | (198,5) | (222,1) | | (176,9) | (198,5) |
| Acquisitions | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Dividends | | 0,0 | 0,0 | 0,0 | | 0,0 | 0,0 |
| Share repurchases | | (2.000,0) | (100,0) | (100,0) | | (2.000,0) | (100,0) |
| | **A/B** | **1,59x** | **5,68x** | **5,88x** | **A-B** | **1.062,5** | **1.003,5** |
| | **Pass/Fail** | **Pass** | **Pass** | **Pass** | **Pass/Fail** | **Pass** | **Pass** |